DAILY METAL REPORTER
MONTHLY SUPPLEMENT

METALS

Published Since 1929

In This Issue

FEBRUARY
1959

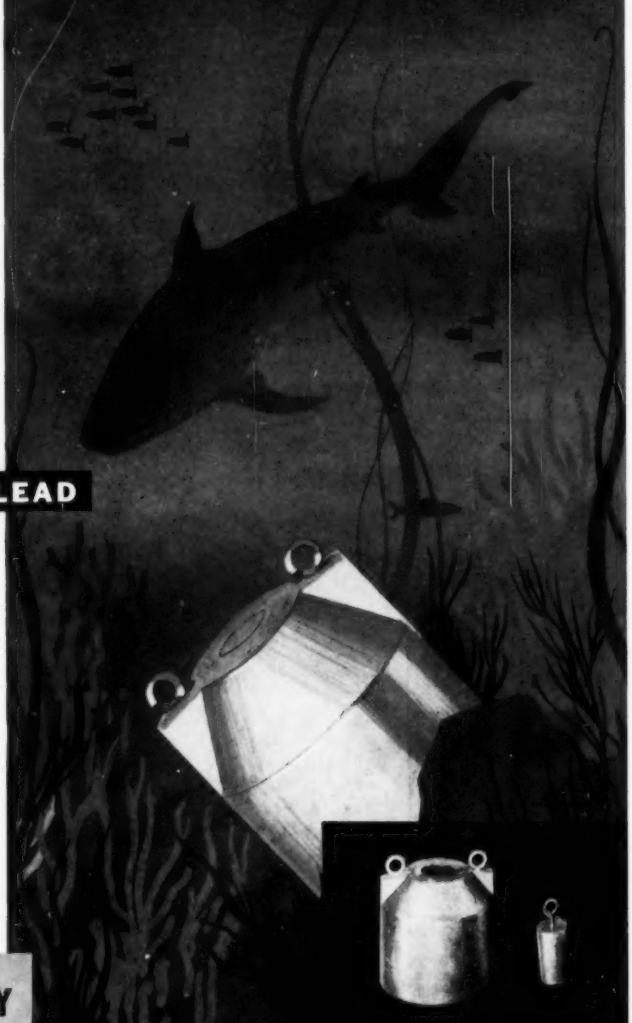
IT TAKES

LEAD

To Bury Radiation In Davy Jones' Locker *PERMANENTLY*

How do you handle a modern "hot potato"?

Tissue-destroying radioactive waste is, and in the foreseeable future will continue to be a really "hot potato." It is a major problem confronting the world's rapidly growing atomic energy program. By-product waste can't be left in the back yard for the trash man—a dog's buried bone method is out. To date, the best disposal method is enclosing it in lead and dumping it into the ocean. But even at 1,000 fathoms, this practice demands A SPECIAL KIND OF "WASTE BASKET."



400 pound 5 curie "cobalt 60" container and plug manufactured by Reliance Foundry, Philadelphia 24, Pa.

DISPOSAL CONTAINERS OF LEAD

Why a *lead* container? Lead is plentiful, low in cost and is the densest of all commonly available metals. This uniform density makes Pb the most efficient shield against harmful radiation known today. It is practically imperishable. Fact is, the container will last longer than the high level radioactive life of its contents.

ST. JOSEPH LEAD COMPANY

ST. JOE

250 Park Avenue
New York 17, New York

The Largest Producer of Lead In The United States

PB-129

Subscription
$5.00 a Year
50c a Copy

DAILY METAL REPORTER
MONTHLY SUPPLEMENT
METALS
Registered U. S. Patent Office
Published Monthly Since 1929

Charles H. Lipsett
Publisher
Dr. J. Zimmerman
Editor
M. Goldfischer
Associate Editor

Monthly Supplement of Daily Metal Reporter February 26, 1959

FEBRUARY, 1959

Vol. 29 — No. 8

TABLE OF CONTENTS

METALS — 425 West 25th Street, New York 1, N. Y.
Published by the National Business Press, Inc.
Phone: WAtkins 4-0660
Cable Address: ATPUBCO, New York
Branches: Washington, Philadelphia, Chicago, Boston
London Office: 81 Highview Ave., Edgware, Middlesex, England
Cable Address: ATPUBCO, London
Affiliated Publications: Daily Metal Reporter, Daily Mill Stock Reporter, Waste Trade Journal, Waste Trade Directory, Standard Metal Directory, Mines Register, World's Waste Trade Directory, Sales (Weekly).

TWO LINE *Editorials*

A current magazine article is headed: "What Castro Needs." What Castro needs most right now, it seems is a shave and a copy of that book on "How to Win Friends and Influence People."

* * *

There would of course, be more hope for a solution of the world's problems at a summit conference if there were any reason to believe that the Russians actually desire a solution.

* * *

Maybe somebody ought to suggest to the cigarette manufacturers that they could eliminate 100% of the tars and nicotine from their cigarettes if they would stop putting tobacco in them.

* * *

A mysterious marksman in Los Angeles has been shooting at all the publicly displayed clocks. Probably just somebody trying to kill time.

* * *

An industrial engineer reports that a personal survey reveals that business executives waste too much of their time talking — some of it, no doubt, talking to industrial engineers making surveys.

* * *

A magazine article asks: "Will your dollar be worth ten cents in 1978?" Some optimists think it may be worth that much, if we're lucky.

February 18, 1958

THE "COLD WAR" on the international scene crept into the copper market when the Government tightened up on U. S. copper exports to Russia and its satellites. In a reversal of a decision taken last November, the Commerce Department put all copper and copper-base alloys back on its positive list. This in effect bars shipment of the metal to Iron Curtain countries. It also requires that shipments to all other countries except Canada be licensed individually by the Commerce Department. The regulations are effective February 20 and cover 33 items, including copper wire and copper scrap.

In addition, except for toll or conversion shipments of refined copper, applicants must name the foreign consumer on their applications to export refined copper, copper ores, mattes, concentrates and other unrefined copper, and copper scrap and copper-base alloy scrap.

Commerce Department officials said they took the action because an unexpectedly large number of applications had come in for shipment of copper to Russia and its European satellites since the U. S. lifted its previous ban last November 10.

Since then all copper shipments to the Soviet Union and its satellites had to get individual licenses but the department approved the shipments almost as a matter of course.

Now, it will be rare for the agency to approve copper exports destined for the Soviet bloc.

Since November 10 shipments of 7,760 tons of the metal worth about $4,700,000 have been approved in 17 shipments to Russia and its satellites.

Only about 500 tons of this metal has been shipped, officials said, but the rest can still be shipped during the next six months. The licenses have covered copper wire and scrap among other goods.

Inquiries made at sources with good foreign connections revealed that Britain which has been a large exporter of both copper and copper wire to Russia is not likely to follow the U. S. action in restricting such exports and the same appears to be true with respect to France, Belgium and other Western allies.

The suggestion that the Department of Commerce had reimposed the export restrictions because of the tight domestic copper supply situation received very little credence here. Commerce Secretary Strauss has not been in favor of dealing with Russia. It was his predecessor, Sinclair Weeks, who removed copper from the export control list after the Paris meeting last summer that was attended by the representatives of a 15-nation consultative body through which the Western powers coordinate their policy on East-West trade.

World Lead-Zinc Meeting

The on-again, off-again world lead-zinc conference under United Nations auspices—the third since last September—has been tentatively scheduled for April 28-May 1, probably in New York City rather than in Europe. Also tentatively scheduled is an organization meeting for a world lead, zinc study group. This is expected now to be held May 4-7, also in New York.

The Canadian position reportedly has been a factor in holding up the next international meeting. Canada is said to be opposed to joining a global agreement which would entail limiting its lead and zinc exports. It is also reported that Canada is reluctant to sign an international pact which would in any way tend to underwrite the U. S. imposition of import quotas on lead and zinc. The U. S. has indicated that it might consider revising the quota system if other world-wide arrangements could be mutually agreed upon by interested nations.

As far as the import quotas on lead and zinc are concerned, it was reported that the Administration has set up a special committee to supervise operation of the system. The new group, established by the Cabinet-level Committee on Foreign Trade Policy, including officials of the State, Commerce, Interior and Treasury Departments, has been handed a group of requests by various foreign countries to be assigned specific quarterly quotas.

The specific quarterly quotas are assigned on a country-by-country basis. These amount to, for both ores and concentrates and basic metallic forms, 354,720 short tons a year of lead and 520,960 short tons for zinc. Included in these over-all limits are "all other foreign countries" category amounting to 22,300 short tons for lead and 47,480 short tons for zinc.

Requests have been received, it is learned, from Spain, Australia, Guatemala, Honduras and Italy to be removed from the so-called "basket" categories and assigned specific quarterly allowable quantities. These requests are directed, in the case of Australia and Italy, specifically to certain categories. The others have no specific quarterly assigned quotas. Importers handling lead and zinc from these "basket" category countries are on a first-come-first served basis when the quarterly quotas are opened and attempts are made to get these metals and ores into the country before being shut off.

The committee, it is reported, hopes to have some quota modifications to accommodate these countries by the time the next quota period begins. This date is April 1.

Views of Seaton

Secretary of Interior Fred A. Seaton said that he would oppose the removal of lead and zinc import quotas under present circumstances. Asked at his press conference whether he favored permannent lead and zinc quotas, Mr. Seaton replied that "nothing is permanent." He added, however, that he would not do anything that would give the lead and zinc industries less help than they are getting now.

However, Mr. Seaton said the Administration was not contemplating any new stabilization measures at the present time.

Discussing the effect of the quota system, Mr. Seaton pointed out that the lead and zinc prices are higher now than they were before the restrictions were announced.

Since the imposition of the quotas, Mr. Seaton said, domestic production of both lead and zinc has increased. He noted that zinc production, which had been at the rate of about 30,000 tons a month, was boosted by 2,000 tons while lead, which had been at a 20,000-ton monthly rate, had also gone up by 2,000 tons.

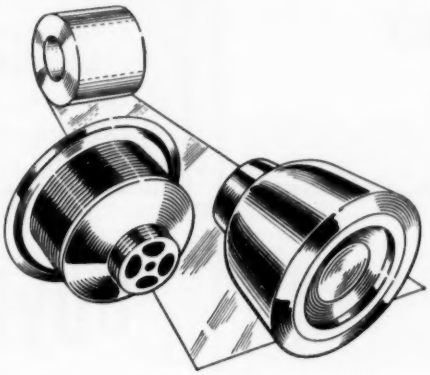
Mr. Seaton predicted increased

(Continued on Page 16)

BUSINESS IN MOTION

To our Colleagues in American Business . . .

Although miles apart in their functions the door knob and sink strainer shown below have one thing in common. Both are made from Revere Brass Strip. Revere Leaded Brass Strip was used to make the sink strainer because of the ease with which large diameter threads are machined, the excellent surface it develops for chrome plating, the inherent corrosion resistance of brass and its drawing characteristics (strainer had to be drawn from .065″ gauge x 7″ strip to a 2½″ depth).



The Revere Brass Strip used by the manufacturer of seamless, one-piece door knobs possessed still other characteristics that made it the most desirable for that specific purpose. Because of the unique procedure by which these knobs are made the brass has to be able to stand up under some mighty rugged going. Further, the brass strip has to be of uniform gauge and be without any sign of fracture or crimping when drawn, as well as have consistently correct grain structure to insure a smooth, flaw-free surface on the finished knobs without extensive finishing and polishing operations.

These are but two of the literally thousands of ways Revere Brass Strip makes it possible for manufacturers to offer *their* customers a superior product at the lowest possible cost.

The combination of unusual properties makes Revere Brass Strip, in various anneals and tempers, equally suited to stamping and spinning. Manufacturers have found that the high ductility and malleability of various Revere Brass Alloys effect savings in time and cost because deeper draws in one operation are possible. And, because of the low, work-hardening rate, a combination of forming processes is frequently possible in making intricate shapes without the need for intermediate annealing. Should annealing be required the temperatures used are low (usually not over 1100° F.) which means lower fuel cost.

Revere Brass Strip not only permits deep draws, but fast draw speeds as well, which is particularly desirable for repetition press work or other operations where parts are produced in large quantities. This means relatively low power consumption.

Revere Brass Strip does not foul dies quickly, requiring only a minimum of die re-dressing. And one of its most desirable features is that it plates well and polishes easily, requiring only a minimum of finishing.

Revere Brass Strip in its various alloys is still another example of how, by fitting the metal to the job, it is possible to produce superior products at the lowest possible cost.

Practically every industry you can name is able to cite similar instances. So we suggest that no matter what your suppliers ship you, it would be a good idea to take them into your confidence and see if you cannot make a better product at lower costs by specifying exactly the *right* materials.

REVERE COPPER AND BRASS INCORPORATED

Founded by Paul Revere in 1801

Executive Offices: **230 Park Avenue, New York 17, N. Y.**

An Analysis of

The Lead-Zinc Import Quota System

By C. E. SCHWAB, Chairman, Emergency Lead-Zinc Committee

ASSESSMENT of the lead-zinc quotas over a short span of 4 months leaves much to be desired for the short range outlook. Following Secretary Seaton's announcement at San Francisco of the President's action, we analyzed the Proclamation as indicating no very significant or very prompt changes in U. S. mine production, in prices, in employment or profits. Although subjected to only a brief test of time, this analysis is still accurate.

Compared with the immediate pre-quota period, any improvement in mine output will only be due to properties trying to return to a normal work week. Depending on the individual mine, this volume change may serve to lower unit costs or reduce losses — not necessarily putting the operations in the "black."

The price of zinc rose 1½c (from 10c to 11½c) — but seems destined to remain at about this level for a while. Lead rose 2c (11c to 13c) — but has already skidded back to a not-too-strong 12c. On the basis of lead plus zinc, the combined pre-quota price of 21c compared to today's 23½c is a 12 per cent increase. Expressed as a percentage increase this may appear significant but a word of caution to those who might use such percentage figures to over-emphasize the beneficial effect of quotas. It reminds me a little of the two prospectors lost in a raging, 15 below zero blizzard. The one, trying to comfort his partner, said he figured they might make it to their cabin, since he read somewhere that you freeze to death more slowly at 15 degrees below than at 30 degrees below! What they needed was a good "spring thaw" and you all know, better than I, that the lead-zinc industry needs a minimum 28c combined price (say 13s Zn & 15c Pb) to "thaw" out. Unless something of startling national or international impact occurs, there is just not going to be any "thaw" in 1959.

Smelter production has increased since the quotas were proclaimed, as shipments to consumers showed marked improvement in late September and for the month of October. Zinc seems to be holding its own fairly well but lead shipments plummeted after the October rise and December was the smallest shipment month of 1958. In fact, the situation in lead is again so acute we might expect the pre-quota conditions for this segment of the industry to return for a time.

1959 Transition Period

All this must seem to be a rather gloomy preface, when I tell you our Committee's short-range policy continues to be that of "trying to make quotas work." However, giving quotas a chance to work does not preclude acknowledging that 1959 is going to be a most difficult transition period. With the staggering inventory of metal in U. S. primary producers plants before quotas were finally imposed — with the allowable imports of refined metal at a very high figure — and with only slowly improving industrial consumption, it is most unlikely that the true effect of the Proclamation will be shown until the 4th quarter of 1959 — perhaps not until early 1960. Certainly this is true of the mining phase of our industry which so badly needs a reasonable combined price of at least 28c. It is equally true of domestic smelters — chiefly those with a major stake in domestic mines — which must wait for the time of improved consumption when they are no longer forced to face the dilemma of "financing" practically all the world's metal stocks or of shutting down their own domestic mine production.

However, during this transition period there is another problem — the solution to which is of equal importance to the miners, the smeltermen, and the consumers — in this case the processors, fabricators and manufacturers.

By way of background, some terminology should be understood.

In the definitions used by the Tariff Commission, pig lead, slab zinc, lead or zinc concentrates and a few other items are termed "Unmanufactured" lead or zinc. The Commission labels zinc oxide, die cast zinc alloy, solder, Babbitt metal, lead oxide, zinc sheets, lead pipe and sheets and other similar products which have been processed or semi-manufactured, as "manufactured" lead or zinc.

Wider Controls Needed

A simple case will illustrate why import controls on "Unmanufactured" lead or zinc make it mandatory that compensatory import controls must also exist on "manufactured" products. The case of an increased duty is easy to follow. Let us suppose the London price for lead is 8½c and also suppose a 4c duty would be imposed — (instead of the present 1 1/16c). The comparable U. S. price for pig lead would then be about 13c. U. S. processors and manufacturers would buy at this price in the U. S. and convert the pig to various "manufactures." Say they would roll it into lead sheets — which at a 13c pig lead price would normally sell at 17½c. Meanwhile, the foreign processor could buy his pig lead at the London price of 8½c, roll it, and deliver it as an import for about 13c — (including the present duty of 1.32c on imported sheet lead). It is very clear that under such an arrangement U. S. processors (or the rollers, in this case), U. S. smelters, and ultimately U. S. miners would lose their outlet for pig lead sold as lead sheets.

This example is just as true under quotas as under the supposed increase in duty. It is illustrative of why we have always maintained that controls, by way of either increased duty or quotas, must be imposed on both "Unmanufactured" and "manufactured" lead and zinc to avoid a paging loophole if the intent of any action on "Unmanufactured metal was not to be thwarted and, in fact, negated.

In all legislation which we have proposed the whole schedule of lead-zinc products were to be treated in a compensatory manner. Noteworthy, the Administration's proposed "sliding scale" import tax of mid-1957 recognized this fact, as it also set forth a compensatory import tax on a number of "manufactured" items.

Our petition to the Tariff Commission in September, 1957 asked for a finding on both "manufactured" and "Unmanufactured" items. The

Talk delivered before National Western Mining Conference in Denver on Feb. 6, 1959.

Commission rejected the "manufactured" phase of our petition and subsequently the case was heard and recommendations made on only the "Unmanufactured" items — chiefly imports of pig or slab, and concentrates. Thus, the President's quota Proclamation limits imports on these items only — there is no control whatsoever, other than the present GATT-reduced duty, on zinc oxide, lead oxide, die cast alloy, zinc sheets, lead sheets, etc.

In order now to circumvent the quotas, a foreign producer need only convert low priced foreign metal by a very simple "manufacturing" process and import it into the U. S. free of any quota control. The net result is obvious to you, I am sure — a gross inequity, doubtless unintentional, whereby the very intent of the quotas on refined pig or slab and concentrates can be frustrated.

Examples of Offers

Remembering that pre-quota imports of "manufactures" have been of very insignificant amounts, here are just two examples of what has actually occurred:

On January 15, 100 tons of rolled lead sheet was offered for delivery to New York from the Netherlands. The price quoted, duty-paid, was 13.22c per pound — this was at a time when lead sheets of U. S. processors and manufactures were quoted at 17½c. To express this another way, the foreign lead sheet was being offered in the U. S., duty paid, at about the same price as unprocessed pig lead in the U. S. market.

On January 6, zinc oxide from Mexico was being offered to consumers in Houston at 10½c per pound duty paid, compared to U. S. processors quoted price of 14½c per pound when slab zinc was 11½c.

At this time we have almost completed a very preliminary study to assess the potential competitive position on four large volume, non-quota "manufactures" — zinc oxide, zinc die cast alloy, lead oxide, lead pipe and sheet. In any event, all segments of the industry — mining, smelting and manufacturing companies — still have a considerable deficiency to overcome until import controls on lead and zinc are perfected.

Every effort must be made to show that this is truly a major problem — one not to be lightly brushed aside or pigeonholed until irreparable damage is done. Otherwise, the future beneficial effect of the present quotas which can be anticipated for U. S. mines will be seriously diluted — in fact, could become so negligible as to cause an already mildly restrictive quota to be almost ineffective.

Escape Clause Route

It appears that we might again have to travel the "escape clause" route for these "manufactures" as the President has no finding of injury before him for these products. Logic would seem to indicate that, since the Commission has twice unanimously found injury due to imports of "Unmanufactured" items, the basic intent of this finding would be nullified if it is now shown that uncontrolled imports of "manufactures" can do just as much "injury" as the Commission found uncontrolled imports of "Unmanufactures" were doing before quotas were imposed.

Quotas were proclaimed in response to a second unanimous finding of injury by the Tariff Commission, but lets look at this from another angle. Not only was a very critical condition existing inside the U. S., but also outside the U. S. Production outside the U. S. soared beyond consumption and world prices headed for the cellar, carrying U. S. prices down with them. To a non-industrialized nation which depends on its exports to the U. S. and to the world market, this spelled real economic trouble. Parenthetically, we should note that under these conditions U. S. mine and smelter production declined 30 per cent — but no such contribution to the problem of overproduction was made by mines outside the U. S.

Thus, by early September, the U. S. faced both an internal and external problem.

The first step to correct the internal problem was to establish quotas. This also had a very salutary effect on the external problem. Simple arithmetic will plainly show that foreign exporters are going to be better off under quotas in a more stable, fairly priced U. S. market than they were with unrestricted, large volume imports at distressed prices in the pre-quota period. Their flow of "trade dollars" from the U. S. is bound to improve. This only proves the contention we have held so long. A fair, reasonable, relatively stable price for these two commodities in the U. S. will benefit producers in foreign nation's as much as it will domestic producers. Perhaps indicative that the thought of a reasonable priced stable U. S. market has taken root may be seen in the recent action of the O. A. S. asking the U. S. to impose quotas on coffee — some of the same nations whose anguished cries were heard when lead-zinc quotas were first announced in late September.

The second step, in an effort to solve the external problem, is U. S. participation in international discussions concerning the non-U. S. market for these metals. Here again the problem is flow of trade into the world market. However, the solution to improved or more stable markets outside the U. S. rests with the major exporting nations — not with the U. S.

International Discussions

It would be most unwise for us to even hazard a guess as to the final outcome of the international discussions about lead and zinc. We may be observing a significant change in U. S. policy as our government tries to fill its role as a world leader by action on basic raw material commodities — action which meets the needs of domestic producers and at the same time assists in the needs of non-industrialized foreign producing nations.

Fortunately, since September, a much closer working relationship has developed between members of the industry and officials of the Governmental departments — particularly Interior, Commerce and State. Unquestionably, the fact that action was finally taken by the Administration — that is, quotas were proclaimed — paved the way for this much improved situation. Numerous conferences have been, and will continue to be held, as industry and government representatives seek to resolve differences of opinion in the light of frank discussion rather than the heed of public debate.

Certainly we of the lead-zinc industry have a much better understanding of the intricacies, the implications and the broad conflicts in that area all too briefly labeled "U. S. foreign policy." Particularly this is true since our Committee was represented at the U. N. Geneva meeting in November.

In turn, we feel the governmental officials concerned with lead-zinc have a clearer picture and greater understanding of our side of the matter. We have had many discussions with these officials about the potential imports of "manufactures" — so it will come as no surprise to them when I commented about this today. We also have discussed at length with them our belief that an adequate duty will be the best long-range solution — they are fully aware of this, too. But important for the short-term, they know also that our Committee is trying its best to make quotas work in the belief that only actual experience will prove or disprove the effectiveness and adequqacy of this action.

Silver — Its Uses and Prospects

By RALPH L. WILCOX, Assistant Sales Manager,
American Smelting and Refining Company

INDUSTRIAL uses of silver accounted for better than half of the estimated 250,500,000 toy ounces of silver consumed in the free world in 1958. Furthermore, industrial uses are expected to continue to expand in the future so that the traditional use of silver in the arts will become less and less important to the producers of silver as an outlet for their product. Most people today still think of silver in terms of its intrinsic value as jewelry, silverware and coinage. This is understandable because silver along with gold and precious stones have represented a store of wealth and value since the dawn of history. Even the Holy Bible makes numerous references to silver. In the Old Testament, for example, an early reference to silver is found in Genesis Chapter XIII. V. 2 "And he (Abraham) was very rich in possession of gold and silver."

However, it has been modern industry with its scientific approach and ingenuity that finally recognized the true value of silver — its unique physical and chemical properties! Pure silver has the whitest color, the highest electrical conductivity, the highest thermal conductivity and the highest optical reflectivity of all the metals. Only gold is more ductile and malleable. Silver forms salts and compounds with valuable photosensitive, bactericidal and bacteriostatic properties. These properties have been and will continue to be the real stimulant to increased industrial demand for silver in both new and established applications.

Photographic Field Most Important

The largest and most important industrial use of silver continues to be in the photographic field for sensitized paper and for film for amateur photography, commercial and professional photography, X-ray, and professional motion pictures. An estimated 28 to 32 million troy ounces of silver is consumed annually in the U. S. in the photographic field and about an equal amount for this purpose in the rest of the free world.

The growing popularity of color prints and slides should stimulate further sale and use of film especially for amateur photography. Offsetting this is the fact that the silver in color film is recovered by replacement with dyes in the finishing process so that the final print contains no silver. In practice about 90 per cent of the silver is recovered in the finishing of color film whereas only about 50 per cent of the silver is recovered in processing black and white film. Electronic tape-recording also poses a threat to the use of film in motion picture, television and other specialized applications but experts estimate it will be another decade before this assumes serious proportions. Furthermore, the amateur photographic field is the large outlet for film where the use of electronic tape would be impracticable.

Therefore, while film usage and particularly that for color is expected to expand considerably in the future, the net increase in the use of silver might not be in direct proportion to the expected increase in film sales. However, the manufacture of silver sensitized paper, which is used by the majority of office and industrial copying machines, is expected to show substantial gains in the next few years. Also continuing research and development will most likely result in new black and white products for a variety of new uses. All in all the future of silver in the photographic field appears bright.

Silver Solders and Brazing Alloys

The use of silver solders for brazing or otherwise bonding together practically all nonferrous metals and alloys as well as iron and steel is the second most important industrial outlet for silver. Annual consumption of silver for solders in the U. S. currently amounts to about 24,000,000 to 27,000,000 troy ounces.

Silver solders are essentially ternary alloys of silver, copper and zinc with a silver content varying from 10 per cent to 80 per cent that flow freely at temperatures from 1145° Fd to 1600° F. However, there are many variations that incorporate higher percentages of silver, additions of cadmium, additions of phosphorous, etc. all designed for specific applications. Several lead base or soft solders contain 2.5 to 5.0 per cent silver for special applications where greater strength is required.

Some of the more important established applications for silver solders are in the refrigeration, air conditioning, automotive and electrical appliance indutries. Two of the newer applications are rockets and jet aircraft. These specialized high temperature applications (heat exchangers, turbine blades, honeycomb structures in wings and tail assemblies, etc.) require a bonding material that will produce a joint that is not only corrosion resistant but also resistant to sever shock vibration.

Several silver solders were developed especially for these high temperature applications. One of these special solders is sterling silver (92.5 per cent Silver, 7.5 per cent Copper) containing about .3 per cent lithium for improved wetting and fluidity. Another contains 85 per cent silver and 15 per cent manganese. Abroad, silver-palladium and silver-palladium-manganese solders are in use. The addition of palladium improves strength and ability to wet iron and nickel base alloys.

Practically every end product that has a joining or bonding problem is a potential user of silver solders. Where strong, ductile, corrosion resistant joints are necessary and the higher temperature required for brass and nickel-silver brazing alloys and copper alloy welding rods would cause damage to the metal to be joined, Process Engineers specify and insist upon the use of silver solders. This important outlet for silver should continue to grow in the future.

Electrical Contact Use Growing

The third most important and rapidly growing industrial use of silver is in the electrical industry for all forms of electrical contacts where low contact resistance is important. An estimated 18,000,000 to 20,000,000 troy ounces of silver is used annually in the U. S. for this purpose.

Practically all of our modern electrical appliances such as electric blankets, fry pans, shavers, toasters, broilers, pressure cookers, coffee makers, irons, food and beverage mixers, washers, dryers, etc. employ silver contacts in the form of either silver plating, pure silver, silver alloy or silver bonded to steel or copper. Also practically all contacts on high voltage switching equipment are silver plated or otherwise employ silver to silver contact surfaces. Indeed it would be difficult to think of an on-off type electrical switch application today that does not make use of silver in some form.

Other electrical equipment requiring a moving contact such as motor and generator brushes, etc. also favor silver in the form of sintered mixtures of silver or silver alloy and graphite. Recently sintered mixtures of silver and cadmium oxide in the form of wire have shown promise for the manufacture of electrical contact rivets by cold heading. Improved

Talk given Feb. 5 at National Western Mining Conference in Denver.

performance without loss of conductivity is claimed.

The real explanation for the popularity of silver as a contact material lies in the fact that its contact resistance is lower than that for copper and previous commonly used contact material. The reason for this is the corrosion product that forms on silver surface is usually silver sulphide (Ag2S) which material is a conductor of electricty and, therefore, offers little resistance to the passage of electric current. The corrosion product that usually forms on copper is copper oxide (Cu20) which material is practically an insulator and, therefore, offers high resistance to the passage of electric current.

The outlook for continued expansion in the use of silver for electrical contact surfaces both here and abroad is excellent. Not only will continued expanded production of various electrical appliances and labor saving devices demand more and more silver contacts but also our rapidly expanding electronics industry is beginning to make greater use of silver for contact surfaces. In radar for example all connector surfaces are coated with silver by electroplating. The growth of these industries will mean increased demand for silver.

Ceramic Uses

The ceramic industry makes good use of silver in the form of silver carbonate or silver chloride for toning pink colors in preparing overglaze colors and to produce a yellow tinted pigment. Also in the last few years growing use has been made of silver powder or flake combined with glass fluxes and metal compounds for use as a conductor and electrode material on electronic ceramics. Complicated electrical circuits for television, radio and numerous other electronic applications may be screen-printed or painted on ceramic discs or plates, then fired at ceramic temperatures to fuse the metallic silver compound and develop adherence to the ceramic. These processes have been developed to the point where the entire operation of printing, baking, assembly and testing of the complete functional unit can be done by automation. Only a little silver is still used from colloidal solutions such as liquid bright silver for decorative application to ceramics.

Ceramic outlets currently account for about 1,000,000 to 1,300,000 troy ounces of silver annually in the U. S. alone. The outlook for expanded use in this field both here and abroad is bright with the growing use of printed circuits in the manufacture of radios, television and other electronic devices.

Silver in Batteries

A growing industrial use of silver is in the manufacture of primary and secondary silver-zinc batteries. Primary cells are designed for one shot applications but secondary cells or rechargeable batteries can be used over a number of discharge-recharge cycles. Silver-zinc batteries find their biggest use in equipment requiring high power-output with minimum weight and size. Silver-zinc batteries are as much as six times lighter and five times smaller than other batteries of similar capacity. In addition, the silver-zinc cell discharges at constant voltage levels.

The silver-zinc cell is ideally suited for jet aircraft and helicopter storage batteries, portable television cameras, torpedos, guided missiles and a wide variety of communication, instrumentation and photographic equipment.

Guided missiles are probably the newest and most glamorous application of silver-zinc batteries where they are used to fire propulsion fuel, trigger take-off devices, energize guidance control circuits and mechanisms, power telemetering equipment, etc. However, according to information in the public press earlier this year, the Navy installed a silver-zinc battery in one of its atomic powered submarines. This story created a considerable stir in the trade with various estimates of the amount of silver likely to be required per submarine from a few tons to 65 to 70 tons for a four-battery powered submarine. We understand that after about seven months of testing the Navy is still interested but no doubt considerable more testing and further design and construction changes will have to take place before possible final acceptance.

It looks like the silver-zinc battery is here to stay with a number of prominent manufacturers in the U. S. and abroad in the field.

The silver-cadmium rechargeable battery is also a light weight, compact, long life battery with performance characteristics similar to the silver-zinc battery. However, the silver- cadmium battery is a little heavier than the silver-zinc battery but is somewhat more rugged with a much longer life. The silver-cadmium battery is finding growing use in portable equipment where rugged long life is somewhat more important than minimum weight.

Another type silver battery was recently announced by the National Carbon Company. This is a solid electrolyte battery made with silver, silver iodide and vanadium pentoxide. This battery weighs less than one ounce, has practically unlimited shelf life, and is designed for low current applications. While the silver content of this new battery is relatively small, the battery represents a new industrial application for silver.

Silver is also used in the fractions of a percent as addition to proprietary lead-antimony grid metals in lead-acid type industrial storage batteries for improved corrosion resistance and life of the battery.

Total use of silver in the battery field in the U. S. alone currently amounts to about 1,500,000 troy ounces per year.

Silver as a Catalyst

Silver has been used for years as a catalyst in certain chemical reactions such as vapor-phase oxidations but in rather insignificant quantities. Recently with the tremendous growth in the manufacture of synthetic organic chemicals as well as technical advances in the preparation of chemical catalysts, silver is beginning to be used in substantial quantities. Several important manufacturers of synthetic organic chemicals in the U. S. and Germany have doubled and tripled their use of silver as a catalyst in the past few years. This is one application that could show substantial gains in the future.

Silver for Water Sterilization

The efficacy of silver as a sterilant or disinfectant has been known for years. Tests have shown that a silver concentration of one part in 10-20 million renders water safe for human consumption even if the water was heavily infected. However, up to now only limited practical use has been made of silver for water sterilization in commercial enterprise.

The following independent, authoritative consulting opinion is of interest:

"Trace silver disinfection does have application to many types of potable waters and to a variety of industrial water desliming and spoilage problems. It has rapid bacteriostatic action but its true disinfecting action is slower than most other chemical disinfectants. Its principal advantages are freedom from odor and taste, long lasting residual action, non-volatility, and, as far as we know, absence of adverse physiological effects to animals."

As a potential market for silver the treatment of only 1 per cent of the water used in the U. S. for human consumption per year would require about 30,000,000 ounces of silver yearly. However, it is very doubtful whether a large market could be developed for treating municipal water supplies in the U. S. because the technology of chlorine disinfection is well established and economics favor chlorine. A large potential market lies rather in applications utilizing the bacteriostatic in preference to the bactericidal action of silver (prevention of multiplication of bacteria as opposed to actual kill of the organisms) in the treatment of water made potable by other methods.

Examples of possible utilization of silver's bacteriostatic action in potable water in preventing the multiplication of spoilage and slime-forming organisms are:

1) Making ice from potable water for icing various food products for temporary storage or shipment to market.

2) Water used in the cleaning and processing of food products for subsequent packaging by canning, etc.

3) For desliming industrial water used in paper processing.

4) For treatment of various oils and cutting fluids to prevent and control rancidity.

Several companies in the U. S. and abroad such as J. H. Scharf Manufacturing Company, Salem-Brosius, Inc., Permachem, Movidyn have shown some interest in silver as a sterilant. This valuable property of silver could be developed into an industrial outlet of substantial magnitude given the proper backing and development.

Aircraft and Diesel Engine Bearings

Silver is used in the manufacture of steel backed aircraft and diesel engine bearings and bushings where its excellent thermal conductivity is utilized to conduct heat away from the bearing surface. This type bearing is made up of three layers. The first being the steel shell or back for strength, the second being fine silver to conduct

heat away from the third layer or bearing surface which is usually a lead base alloy with indium or other additions to inhibit corrosion when in contact with oil and gasoline.

While silver bearings and bushings continue to be favored in diesel engines for important applications, their use in aircraft has dropped to practically a replacement status with the coming of the jet engine. It will take a new application in the passenger automobile or truck field to revive this once substantial outlet for silver.

Atomic Energy Power Reactors

The Atomic Energy Commission and the U. S. Navy have been experimenting through Westinghouse with the use of an alloy containing nominally 80 per cent silver, 15 per cent indium and 5 per cent cadmium for control rod material in P. W. R. reactors (pressurized water reactor) as a substitute for the more expensive and less available hafnium currently employed.

This silver-indium-cadmium alloy has excellent neutron capture characteristics, irradiation stability, high thermal conductivity and excellent resistance to corrosion by hot water. However, initial tests indicate that the creep strength or resistance to plastic flow under static loading of this alloy was not as good as it should be. Efforts are in progress to improve the creep strength of this alloy.

The P. W. R. reactor is currently the most popular type for use in submarines and for electric power generation. If silver alloy is adopted for control rod material it would mean a new and significant outlet for silver.

Miscellaneous Uses

There are a great many miscellaneous industrial uses of silver that individually consume relatively small amounts but in the aggregate are of considerable importance. A few of these small uses are worthy of brief mention.

Silver is used for coating fine copper wire (30 & 36 gauge) by plating to protect the wire during subsequent insulation with a special plastic (telflon) for application in the range 500° to 1,000° F. Actually the silver is plated on 14 to 20 gauge wire in the amount of about 4 per cent by weight and then redrawn before insulation is added. This specialized, high temperature resistant, insulated, fine copper wire is used for electrical circuits in electronic devices, aircraft, and guided missiles.

Silver is used for desalting sea or other brackish water. A portable desalting kit weighing about 1¾ pounds that provides about 7 pints of drinking water from sea water was developed and used extensively during World War II and continues in use today.

These desalting kits operate on the principle of ion exchange and contain a special high capacity cation exchanger with silver ion as its replaceable cation. Approximately 6 troy ounces of silver are incorporated in each kit.

There is little likelihood of silver being used on any big scale to desalt sea water since there are several other methods of accomplishing this at a considerably lower cost. However, where space and weight are important factors sea water desalting kits employing silver are the most efficient and their use should expand in the future.

Silver is used with combinations of palladium and gold for dental alloys that are strong and approach the passivity of gold. These alloys are used mostly in making fixed bridges. The use of silver amalgams (alloys of silver-mercury-in) for dental fillings is world wide and well known.

The use of silver as a backing for mirrors and thermos bottles is widely accepted because of its excellent reflectivity of light from the violet to the far infrared region of the spectrum and the ease with which brilliant coats of silver can be deposited on glass by the chemical reduction of its salt. The theatrical and advertising industries use silver coated glass in the form of flake for use on costumes, scenery and displays.

The pharmaceutic industry makes good use of silver in various antiseptics and germicides chiefly in the form of colloids such as colloidal silver iodide, colloidal silver chloride etc. or as nitrate. However, these uses have declined somewhat since the introduction of sulfa drugs, penicillin and the newer antibiotics.

Medical and scientific equipment manufacturers make use of the resistance of silver to attack by most alkaline substances and most acids and, furthermore, when chemical attack takes place, the corrosion products are mostly insoluble and tend to form a protective coat against continued attack. While a significant quantity of silver is used in the manufacture of special autoclaves, stills, condensers and for lining vats etc., the stainless steels, and other corrosion resistant materials based upon nickel cobalt and titanium have furnished strong competition.

Silver in the form of organic salts has shown some promise as a fungicide to replace organic mercury salts in the treatment of seeds.

World Supply and Demand

If the foregoing resumé of industrial use for silver appears bullish for the future of silver, it should. Yearly consumption of silver in the free world for all uses including coinage during the past decade has consistently exceeded the yearly mine production of new silver. (See Table No. 1). During this period, additional supplies were made available to the market from demonetized stocks held principally by Cuba and England. Cuba alone for example supplied approximately 65 million ounces. Russia also supplied about 18 million ounces of bar silver to the free world markets during this period. In addition there is an estimated 20 to 30 million ounces of silver per year available to world markets from salvage of old jewelry, silverware, photographic film, old coins and other worn out scrap that augment primary mine production. The big question is where will the additional supplies come from in the future?

The outlook for increased silver production in the world depends upon not only the price of silver but also upon the price of copper, lead and zinc. The reason for this is that today very little silver is the primary objective of mining. Silver is now usually recovered as a by-product of mining for copper, lead and zinc with which ores it is commonly associated. Since it is the over-all revenue per ton of ore that determines whether a particular ore deposit can be mined, a fair price and a good market for silver encourage the production of the associated metals and vice versa. This is one reason why ASARCO and other mining companies in the U. S. have strongly supported the U. S. Government's silver purchase program.

Barring any tremendous expansion in the production of copper, lead and zinc (which seems highly unlikely at the moment) and any drastic drop in the price of silver, the world production of newly mined silver over the next few years should continue at levels of the past few years. This outlook for supply considered in light of growing industrial demand would indicate that the price of silver over the next few years is likely to continue at or improve somewhat over the price levels of the past few years. For reference, the yearly average of the New York refinery price as published by Handy & Harman along with the London spot price for the past five years are shown in Table No. 2.

TABLE NO. 1

A Decade of World Silver Production and Consumption

(Millions of Troy Ozs.)

Year	Mine Production*	Consumption**	
		Arts & Industry	Total Incl. Coinage
1949	156.9	132.5	216.3
1950	176.7	157.4	201.5
1951	172.9	165.0	255.5
1952	188.8	142.1	256.4
1953	194.0	168.3	259.1
1954	186.5	160.8	244.2
1955	195.7	192.8	245.4
1956	194.4	210.2	266.7
1957	196.0	209.8	289.4
1958	201.7	187.4	250.5

* U. S. Bureau of Mines ex Russia and Satelites.
** Handy & Harman ex Russia and Satelites.

TABLE NO. 2

Silver Quotations

(Per troy ounce — 999 fine)

Year	NEW YORK (Cents/troy oz.)			LONDON SPOT (Pence/troy oz.)		
	High	Low	Avg.	High	Low	Avg.
1958	90.375	88.625	89.044	78.750	74.750	76.211
1957	91.375	89.625	90.820	80.500	77.125	78.927
1956	91.625	90.000	90.826	81.375	76.625	79.132
1955	92.000	85.250	89.099	80.250	73.750	77.507
1954	85.250	85.250	85.250	74.375	72.000	73.482

BRITISH COPPER MARKET TONE FIRMER IN JANUARY; RELATIVELY BRISKER DEMAND FOR METAL IN EUROPE

'Managed' Price Discussed by Fabricators; Ceiling on Russian Exports Aids Tin; No Real Improvement in Lead Consumption; Zinc Turns Easier

By L. H. TARRING
London, England

February 6, 1959

DESPITE the news of the further British Government releases of copper from stocks at the end of last year, the copper market had a firm tone during January. This was, to a considerable extent, due to fears of a strike breaking out at the Potrerillos mine in Chile on February 1st, which would also have threatened the final stages of bringing El Salvador into production. After this strike threat was removed at the last minute by a settlement, quotations here lost practically half the previous advance of about £20 a ton. U. K. demand for copper has certainly not been on any outstanding scale in recent weeks, practically all the major users apparently being very comfortably covered under their period contracts — at any rate while demand for their products continues at its present level.

In this connection it must be pointed out that now that Russia has freedom to buy as much raw copper from the West as she likes, her interest in wire and wire rods from the U. K. has fallen off considerably and this has cast a shadow over the wire making industry at the moment. Meantime, it is probably for this reason that in the last few days, electrolytic wirebars have actually been put on warrant on the London Metal Exchange. Some of these may be ex-Government copper of an unpopular size of wirebar but it is believed that some of the metal put on warrant was put there by consumers who had a temporary excess of supplies

On the Continent of Europe, demand has been relatively rather brisker than in the U. K., possibly owing to the fact that consumers there on the whole do not seem to have covered quite such a high proportion of their total needs under period contracts.

As prices on the London market moved ahead of the American quotation the premium obtainable for wirebars in Europe shrank to quite modest dimensions but now that both custom smelters and primary producers have moved up to 30 cents lb., and the London market has receded from its recent peak, there is the possibility that the wirebar premium might widen again, although this is not likely to happen if any appreciable quantities are put on warrant on the L.M.E.

Fabricators Discuss Pricing

Much interest developed here at the end of January when it became known that a private meeting of fabricators was being held to discuss the question of whether a managed copper price with infrequent fluctuations would be preferable to London Metal Exchange daily prices as a basis for pricing products. This is, of course, no new subject and consumers generally are also expressing the desire to see more stable prices. It is believed that this question has been raised afresh by certain producers, though it is not clear whether any suggestions that have been put forward can be regarded as representing producers as a whole.

For fairly obvious reasons, the big American producers do not at present seem to be associated with the idea. In the U. K. there is a difference of opinion among fabricators on this subject but the desire for stable prices seems rather more marked on the Continent, especially since the European Common Market came into being, as there is an obvious desire on the part of consumers in the six countries of the Common Market to be able to buy their raw metal on equal terms with other users in that area. The London meeting is believed to have had counterparts in European countries and the subject is likely to be further thrashed out at a meeting of the International Wrought Non-Ferrous Metals Council in Paris on February 13th.

It seems improbable that any early decision will be made, particularly as users are not at this stage passing final judgment on a fully documented scheme. While British fabricators may dislike frequent and sometimes substantial fluctuations in L.M.E. prices, there is no question that the Metal Exchange has played an extremely important and often vital part in enabling them to buy their metal on very competitive terms.

Good Tone in Tin

The tin market has had a good tone in recent weeks and has undoubtedly been helped by the announcement — rather belated though it was — that the Soviet Union has promised the International Tin Council that its tin exports to non-Communist countries during 1959 will not exceed 13,500 tons. This represents a sizable drop from the estimated 1958 Russian shipments of 17,000 to 18,000 tons but is not as big as some people had hoped for. On the other hand, certain knowledgeable observers are of the opinion that Russia may not have as much as 13,500 tons available for export during the current year. In this connection, it is interesting to note that in both 1956 and 1957 Russia was, in fact, a net importer of tin — her takings of Chinese metal exceeding the quantity she exported to both Communist and non-Communist countries combined.

Consumer demand in America in recent weeks has been quite good and has been matched by a steady interest on the part of European buyers. This has accentuated the tightness in supplies of Grade A metal, which is reflected in the Eastern price being substantially above London parity. Quotations here are held in check to some extent by the belief that some metal is being disposed of — rather cautiously it must be admitted — from stocks acquired by the Special Fund. Obviously too, the nearer the price approaches the key figure of £780 a ton the more cautious buyers are likely to become. However, on the basis of current statistics it would seem that prices must move up to £780 before so very long.

Lead Prices Dip

Although on balance lead prices have eased during the past month, they have, nevertheless, held steadier than some people had expected. The drop in the U. S. domestic price came as something of a surprise, since it had been thought that the American market would be maintained behind the protection of the import quotas and this reduction obviously had some effect on sentiment here. There is also a continuing fear that the U. S. quotas may result in additional supplies be-

AVERAGE BRITISH PRICES FOR COPPER, TIN, LEAD, ZINC

(Per Long Ton)

Mean of Bid and Asked Cash Quotation at Close of Morning Session on London Metal Exchange

	COPPER			TIN			LEAD			ZINC	
	Cash	3 Months	Settlement	Cash	3 Months	Settlement	Current Month	3rd Following		Current Month	3rd Following
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.		£ s. d.	£ s. d.
1954 Averages	248 17 11	239 17 7	249 0 11	719 8 11	709 17 7	720 6 7	98 8 12	94 7 4		78 5 4	77 16 11
1955 Averages	351 14 11	341 0 3	352 5 6	740 2 12	736 12 11	740 12 8	105 17 3	105 9 6		90 13 4	89 12 3
1956 Averages	328 14 5	324 13 1	329 1 8	787 14 9	774 7 7	788 13 3	116 6 5	114 8 9		97 14 3	95 3 7
1957 Averages	219 8 10	221 0 3	219 12 10	754 15 4	747 10 10	755 3 11	96 12 9	96 13 2		81 11 7	80 1 1
1958											
January	171 7 5	174 0 5	171 10 11	730 15 5	725 0 3	731 0 5	72 3 4	72 10 11		62 11 4	62 3 7
February	162 17 9	164 2 11	163 0 9	731 11 0	732 2 9	731 17 6	74 3 7	74 0 6		63 17 2	63 10 11
March	170 2 9	171 4 5	170 5 11	731 5 9	735 13 1	731 12 5	74 15 9	74 11 3		63 9 9	63 11 2
April	175 12 0	176 18 6	175 15 0	731 0 3	729 18 6	731 7 6	72 17 5	73 0 4		62 7 6	62 11 7
May	178 15 11	180 15 1	178 19 1	730 15 11	733 19 6	731 1 5	72 2 9	72 9 6		61 17 1	62 5 3
June	194 12 3	196 3 8	194 15 6	730 5 6	732 16 8	730 10 6	73 5 6	74 3 1		64 3 6	64 13 0
July	199 16 4	200 11 8	199 19 9	731 4 4	733 4 2	731 9 7	71 9 8	72 19 2		63 11 11	64 5 6
August	205 16 3	206 1 2	205 19 6	730 9 0	731 11 0	730 15 0	70 7 8	71 17 1		63 16 8	64 11 4
September	209 6 3	209 8 6	205 9 1	718 2 11	713 17 1	718 19 1	70 10 5	71 17 1		65 0 8	65 7 9
October	236 5 9	229 15 5	236 13 1	740 16 9	735 11 6	741 8 3	74 1 0	74 11 6		69 9 4	69 9 10
November	242 19 6	236 11 9	243 4 3	757 12 6	759 3 9	758 0 6	75 11 8	75 16 9		75 5 6	72 16 1
December	220 19 11	220 14 8	221 2 10	756 9 1	758 1 2	756 16 2	72 4 1	72 6 7		74 6 10	71 5 1
1958 Averages	197 13 3	197 9 3	197 16 11	734 18 6	734 17 11	735 6 1	72 15 8	73 6 10		65 17 12	65 10 12
1959											
January	230 2 0	227 5 10	230 5 0	758 15 6	759 4 9	759 2 10	71 17 0	72 3 3		74 17 8	72 18 8

ing diverted to the European market, the full effect of which may not be felt for some weeks yet.

Meanwhile, there is little indication of any real improvement in the level of consumption on this side of the Atlantic and now that the third United Nations Conference, which was tentatively fixed for February 13th, has been postponed to some indefinite date in the future, the market cannot look for any early help from organized control of exports. The battery trade here is doing very well but, so far, the easier credit conditions have not been reflected in any pickup in cable buying, whilst pipes and sheets are jogging along in a somewhat uneventful way. With supplies generally fairly easy, buyers are satisfied to cover only their immediate requirements and to await developments.

Zinc Turns Easier

In the absence of any positive steps to limit the supply of zinc coming onto the world market, and the knowledge that the third United Nations Conference on the subject has been postponed for an indefinite period, prices on the London market have lost upwards of £4 a ton in the case of prompt but only about £2 a ton for metal for forward delivery. The stringency in G.O.B. supplies here has not been eliminated and the absence of Polish supplies to the London market is certainly being felt, especially as Russia is also offering only limited quantities of refined grades. On the consuming side, only zinc alloy die casting is really active, the other main outlets for the metal being fairly well maintained but showing little progress, —with the possible exception of rolled zinc, which has crept up modestly in recent months. The absence of any American barter business in zinc has been something of a disappointment and the possibility is not overlooked that the full impact of the U. S. import quotas on the European supply situation may not yet have been felt.

U. K. COPPER STATISTICS

The British Bureau of Non-Ferrous Metal Statistics reports U. K. stocks of copper at the end of November as 20,231 tons of blister and 48,792 tons refined compared with October's figures of 18,943 tons and 55,743 tons respectively. The end-November figures include 31,341 tons of refined held by consumers, 6,470 tons in L. M. E. warehouses and 10,981 tons elsewhere. U. K. output in November was 7,627 tons primary refined, 8,604 tons secondary refined, compared with 10,022 tons and 9,997 tons during October. Full consumption details are given below:

PRODUCT	Nov.	11 mos. ending —30th Nov.—	
Unalloyed Copper Products	1958	1957	1958
Wire*	29,127	246,974	270,366
Rods, bars and sections	1,766	16,356	19,465
Sheet, strip and plate	4,206	53,032	51,533
Tubes	5,238	53,771	56,883
Castings and misc.	650	7,150	7,150
Alloyed Copper Products			
Wire	1,466	15,326	14,694
Rods, bars and sections	9,911	112,314	108,466
Sheet, strip and plate	7,427	82,110	81,301
Tubes	1,882	20,417	21,281
Castings and misc.	6,315	70,697	67,318
Copper sulphate	3,272	41,090	24,694
Total all products	71,260	719,237	723,151
Copper content of output	60,219	592,850	611,280
Consumption of refined copper†	47,932	469,389	488,651
Consumption of copper and alloy scrap‡ (copper content)	12,287	123,461	122,629

* Consumption of H. C. copper and cadmium copper wire rods for wire and production of wire rods for export.
† Virgin and secondary refined copper.
‡ Consumption of copper in scrap is obtained by the difference between copper content of output and consumption of refined copper, and should be considered over a period since monthly figures of scrap consumption are affected by variations in the amount of work in progress.

U. K. LEAD STATISTICS

According to the British Bureau of Non-Ferrous Metal Statistics, lead stocks in the U. K. at the end of November dropped to 35,335 tons (27,150 tons imported and 8,185 tons English refined) compared with 40,216 tons at October 31st. Production increased slightly from 7,405 tons during October to 7,739 tons during November. Full consumption details are given below:

	Nov.	11 mos. ending —30th Nov.—	
	1958	1957	1958
Cables	8,113	106,445	91,923
Batteries — as metal	2,529	25,983	26,961
Battery oxides	2,377	22,859	24,286
Tetraethyl lead	2,023	19,394	18,178
Other oxides and compounds	2,364	22,665	23,631
White lead	747	8,885	8,278
Shot	315	3,942	4,178
Sheet and pipe	5,659	63,077	61,192
Foil & collapsible tubes	329	4,120	3,814
Other rolled & extruded	463	5,948	5,332
Solder	1,080	11,778	12,190
Alloys	1,619	15,811	17,203
Miscellaneous uses	1,168	11,719	11,600
Total consumption	28,786	322,626	308,766
Of which:			
Imported virgin lead	14,342	155,127	153,189
English refined	6,707	74,086	70,023
Scrap including remelted	7,737	93,413	85,554

U. K. ZINC STATISTICS

During November U. K. zinc stocks again fell slightly from 39,341 tons at the end of October to 35,396 tons at the end of November, according to the British Bureau of Non-Ferrous Metal Statistics, of which consumers held 13,855 tons. U. K. production was at the rate of 5,563 tons, with consumption at the rate of 26,332 tons (18,787 tons virgin and 7,645 tons remelted scrap) compared with 29,858 tons during October. Full consumption details are given below:

	Nov.	11 mos. ending —30th Nov.—	
Trade	1958	1957	1958
Brass	7,974	88,758	86,663
Galvanizing	8,169	96,157	82,434
of which: General	2,834	31,301	30,674
Sheet	2,176	32,015	19,788
Wire	1,667	19,209	18,569
Tube	1,492	13,632	13,403
Rolled zinc	2,221	21,075	23,301
Zinc oxide	2,086	25,266	24,366
Zinc diecasting and forming alloy	4,275	39,586	43,770
Zinc dust	839	10,392	9,408
Miscellaneous uses	868	10,753	10,086
Total all trades	26,432	291,987	280,028
of which:			
Slab zinc			
High purity (99.99%)	4,495	43,425	47,500
Electrolytic and high grade (99.95%)	4,520	53,114	53,308
G.O.B. Prime Western and debased	9,772	116,882	102,787
Other virgin material	198	2,788	2,604
Remelted zinc	433	5,235	4,919
Scrap—(zinc content)			
Zinc metal, alloys and residues	2,541	31,417	28,693
Brass and other copper alloys	4,473	39,126	40,217

U. K. TIN STATISTICS

The British Bureau of Non-Ferrous Metal Statistics reports that U. K. consumption of tin during November was at the rate of 1,795 tons against 2,072 tons in October. Production also fell from 2,526 tons (38 tons of which were secondary) to 2,224 tons (37 tons) during the month. Stocks in the U. K. at November 30th were nearly 1,000 tons below the October figure of 20,135 tons at 19,285 tons. Full consumption details are given below:

	Nov.	11 mos. ending —30th Nov.—	
	1958	1957	1958
Tinplate	888	10,509	8,996
Tinning:			
Copper wire	43	494	468
Steel wire	8	90	88
Other	66	669	680
Total	117	1,253	1,236
Solder	199	1,791	1,762
Alloys:			
Whitemetal	240	2,547	2,619
Bronze and gunmetal	167	2,196	2,073
Other	42	360	382
Total	449	5,103	5,074
Wrought Tin*:			
Foil and sheets	12	243	220
Collapsible tubes	32	324	266
Pipes, wire and capsules	3	54	35
Total	47	621	521
Chemicals†	81	994	916
Other uses‡	14	97	107
Total all trades	1,795	20,368	18,612

* Includes Compo and "B" metal.
† Mainly tin oxide.
‡ Mainly powder.

COPPER SHOWS FURTHER STRENGTH IN U.S. MARKET; SMELTERS ADVANCE TO 30½c AND PRODUCERS TO 30c

Brass Ingots Hiked 1c to 2½c Lb., New York Lead Cut ½c to 11½c; Zinc Steady at 11½c East St. Louis; Silver and Platinum Higher

Feruary 17, 1959

THE MAJOR metals marched off in different directions during the month in review. Copper and tin climbed, lead declined and zinc and aluminum merely marked time pricewise. Among the other metals, platinum and silver advanced, quicksilver was steady and cobalt receded.

Copper Price Advances

Custom smelters on January 28 advanced their electrolytic copper quotation 0.50c, to 30.00c a pound delivered, and on February 16 the price was hiked another 0.50c to 30.50c delivered.

In between these two price boosts by the smelters, the primary producers took their long-awaited action and advanced their quotations one cent to 30.00c a pound, which level still prevails at this writing.

The most recent price rise in the smelter quotation to 30.50c on February 16 was not unexpected. For several days previous to the increase, custom smelters had turned down business at the 30.00c level and were not keen sellers even at the monthly average quotation. The 30.50c level quoted by the smelters, the highest since June of 1957, is one-half cent above the 30.00c quoted by the large primary producers. Even so, the smelters feel confident that they will have little difficulty in disposing of their intake.

First, custom smelters are not overburdened with any large stocks. Secondly, their scrap intake has been relatively small, and thirdly, some fabricators have been unable to get all the copper they have been willing to buy from the producers, even though they are regarded as regular customers.

Phelps Dodge on February 2 initiated the 1.00c rise in the producer price to 30.00c, and Kennecott and Anaconda took similar action on February 3. The producers' increase reflected a number of elements, including good consuming demand for the metal. Brass and wire mills were not placing orders to cover their current needs but were buying additional tonnages as a hedge against a possible strike in June.

Another factor that played an important role in boosting the producer quotation was the higher price that prevailed for copper abroad.

Following the hike in the producer quotation, wire and brass mills quickly increased prices for their products to reflect a copper price of 30.00c. Mills also correspondingly increased their brass mill scrap buying prices.

Custom smelters, following the increase in their electro quotation on February 16, also increased their scrap copper buying prices 0.25c a pound to a basis of 25.00c a pound for No. 2 heavy copper and wire. Where large quantities of scrap are involved, the price is subject to negotiation.

Leading ingot makers also increased their selling prices for brass and bronze ingots 1.00c to 2.50c a pound, depending on grade, effective February 16. It was the first change in ingot quotations this year. The last previous change, on November 25, 1958, reduced prices 0.50c to 1.00c a pound.

No Real Shortage

While the immediate supply of domestic copper is tight, it is pointed out in copper circles that there is no real shortage. January copper statistics show an all-time high in world output and that the domestic output is at the highest rate since 1957. Unless world copper consumption should also show a substantial increase (and many trade factors doubt that it will gain as much as production has) further increases in surplus stocks are anticipated.

Domestic refined copper statistics for January follow in tons, with the December totals in parentheses: production, 137,361 (146,978); deliveries to fabricators, 114,425 (116,310), and stocks at end of month, 80,780 (80,722).

Lead 11.50c New York

The lead price at New York was reduced 0.50c a pound in February 11 to 11.50c a pound. It was the second reduction this year, the first one of 1.00c a pound having taken place on January 21. The 11.50c quotation is the lowest that it has been since October 1, 1958.

The cut in price did not come as a great surprise. The wide disparity between the London and domestic quotations made the price here vulnerable, and domestic consumers, cognizant of this fact, kept their purchases down to a minimum. The weakness in London was the result of overproduction. The U. S. import quotas have kept appreciable tonnages of foreign metal out of this market, although domestic producers think that too much is still coming in. The failure of the U. S. Government to embark on an active barter program that would syphon some of this foreign surplus off the market also contributed to the weakness abroad.

Even so, several barter deals involving small tonnages of foreign lead have been consummated in the past few days, well informed quarters reported. Other deals are still pending but because of the GSA insistence that the price be lower than the domestic quotation, it is difficult to bring them to a close.

December Lead Statisites

The lead statistics for December, released late in January, made dismal reading for members of the industry. Output increased about 3,500 tons in December, shipments fell nearly 6,000 tons and stocks carried by producers increased around 19,000 tons to the highest level since 1936.

Domestic refined lead statistics for December follow in tons, with the November totals in parentheses: production, 44,042 (40,485); shipments to domestic consumers, 24,852 (30,591); stocks at end of month, 198,508 (179,321).

St. Joe Cuts Output

Reflecting continued depressed conditions in the lead industry, the stocks of lead in the hands of the St. Joe Lead Company are continuing to grow, a company official stated. Consequently, the company found it necessary to further curtail production. Effective February 16, the company's mining and milling operations in southeast Missouri went on a four-day week schedule, and development operations at Mine la Motte were stopped.

January Zinc Statistics

The zinc statistics for January were

not too encouraging. They included a decline in shipments, a gain in producers' stocks and little change in production. January figures for zinc (all grades) follow in tons, with the December totals in parentheses: production, 76,481 (75,503); shipments to domestic consumers, 70,770 (76,862); stocks at end of month, 195,777 (190,237).

The zinc market was steady at this writing with the Prime Western quotation holding at 11.50c a pound East St. Louis. Most of the buying is still being confirmed to the Prime Western grade Some improvement has been noted in Regular High Grade, with buying for Special High Grade metal sporadic.

Early in February, large zinc producers were perturbed by the shading of the premium on Special High Grade zinc. Some producers of this grade are reported to have been selling it at a discount to independent die cast alloy makers who contend that to be competitive with firms that are affiliated with zinc producing companies, it is necessary for them to get Special High Grade metal at a lower price than 12.75c a pound delivered. The premium for Special High Grade is 1.25c a pound above the Prime Western base price of 11.50c East St. Louis. What has irked zinc producers is the fact that some alloy makers who have been getting Special High Grade at a discount, instead of using the metal themselves, have been reselling it, splitting the discount that they received between themselves and the buyers.

Tin Prices Higher

Spot Straits tin at New York was quoted at 102.625c a pound on February 16, compared with the 99.375c for January 16 last quoted in this space. The high for the January 16-February 16 period was the 102.625c for the last day of the period. The low was the 99.375c for the first day of the period.

Prices during the period advanced from day-to-day, reflecting the upward trend on the London market and also consumer buying in the U. S.

At this writing, trade quarters are awaiting an official communique on the meeting of the International Tin Council in London, which got under way on February 17. It is believed that the ITC will decide to maintain its current 48 per cent cut in producing members' exports for another three months, even though late advices from London are to the effect that the six producer countries are likely to ask for more liberal export quotas. Many of these countries are now working at half capacity and even an increase in permissible exports to 23,000 tons, the figure ruling until last September, would be welcome.

Aluminum Output at Peak

Production of primary aluminum attained a new all-time monthly high in January of 156,708 tons, an increase of 4,407 tons over the 152,301 tons produced in December, 1958, the previous peak. Production for all of 1958 came to 1,565,556 tons against 1,647,710 tons in the preceding year.

Primary aluminum prices held steady on the basis of 26.80c a pound for the 30-pound primary ingot, 99.5 per cent plus grade, f.o.b.

Kaiser Aluminum & Chemical Sales, meanwhile, published a price schedule for aluminum rigid conduits for electrical installations which, it stated, will result in significant penetration of the market previously supplied almost entirely by steel. The new per-foot, delivered price of Kaiser Aluminum conduit now averages only two to three per cent above steel conduit.

Silver Advances

The New York silver price registered another advance, during the month in review, moving to 90.375c an ounce on January 20 from the 90.125c an ounce level established on January 8.

Platinum Higher

Leading refiners of platinum on February 17 increased their prices $5 an ounce to $57 an ounce in wholesale quantities and to $60 an ounce in retail lots. The increase was said to reflect reduced offerings of the metal, at higher prices, by Russia, even though domestic demand continued to be mainly of a routine nature.

Quicksilver Steady

Spot quicksilver prices appeared to have steadied at around $218 to $221 per flask of 76 pounds, the range established on December 29. While domestic demand has been lagging, supplies of spot metal remained tight.

Cobalt Prices Reduced

Effective February 1, African Metal Corp. reduced its cobalt prices. For cobalt metal granules in "F" or "G" size, the new prices are $1.75 per pound in 500-pound drums; $1.77 in 100-pound cases, and $1.82 in less than 100-pound quantities. For cobalt metal powder the new price ranges from $2.07 per pound for 100 mesh in 50-kilo cases to $2.70 for the extra fine in five, 25 and 50-kilo cases. The smaller quantities, 5.00c per pound is added. Cobalt metal prices are priced at $1.75 a pound in 500-pound kegs and $1.90 for 300 mesh in 550-pound kegs. All prices are f.o.b. carrier, port of New York.

Washington Report

(Continued from Page 4)

consumption shortly for both lead and zinc.

Legislation Offered

On the legislative scene, Rep. Ed Edmondson (Dem., Okla.) has introduced a bill that would substitute a sliding scale import tax on lead and zinc in place of the present "low level duties." Under the bill, the sliding scales would become applicable "when domestic prices sag to levels that make domestic mining impossible in competition with low-cost foreign production."

"The clear purpose of this bill is to make possible the existence of a domestic mining industry," Rep. Edmondson said. "It is already apparent," he contended, that the Administration's quotas "have not made it possible to reopen the shut-down mines of the nation."

Ask Depletion Changes

The Treasury has requested Congress to close a tax loophole which Secretary Robert B. Anderson said permits mining firms to make excessive depletion deductions.

Mr. Anderson recommended that Congress white a new more precise definition of "mining" into the tax laws. He said his staff was preparing a draft of the proposed legislation.

Mr. Anderson said the government is losing tax revenues because of the courts having placed too liberal an interpretation on the language of the present law.

Aluminum Meeting

The Aluminum Producers Industry Advisory Committee and the Aluminum Products Industry Advisory Committee met with the Business and Defense Service Administration for briefing on Government operations affecting the industry and to review developments in their field.

William C. Trupner, director of the Office of Industrial Mobilization, told the producers' session that a revision of the rules governing the Defense Materials System is now under way to provide for a more simplified procedure. He also added there were plans to strengthen the national defense executive reserve.

Representatives of the aluminum industry will have an opportunity to preview the proposed changes, he stated.

Daily Metal Quotations for January, 1959

The following quotations are taken from the Daily Metal Reporter*
(In Cents Per Pound)

JANUARY	Copper					Tin Straits New York		Lead		Zinc					Aluminum	Antimony	Silver
	Producers' Price Del. Conn.	Custom Smelters' or Outside Price	Electro f. o. b. Refinery	Lake Del.	Aver. Prompt Electrolytic Export Price F.a.s. N. Y.	Spot	Prompt	New York	Outside St. Louis	Prime West. f. o. b. E. St. Louis	Prime West. Del. N. Y.	Brass Spec. f. o. b. E. St. Louis	High Grade Delivered	Spec. High Grade Delivered	30-Lb. Ingot 99½% Plus (f. o. b.)	Domestic Spot 99.5% f.o.b. Laredo	(Cents Per Ounce) New York
2	29.00	29.00	28.60	29.00	28.75	98.00	98.00	13.00	12.80	11.50	12.00	11.75	12.50	12.75	26.80	29.00	89.875
5	29.00	29.00	28.60	29.00	28.75	98.375	98.375	13.00	12.80	11.50	12.00	11.75	12.50	12.75	26.80	29.00	89.875
6	29.00	29.00	28.60	29.00	28.75	98.875	98.875	13.00	12.80	11.50	12.00	11.75	12.50	12.75	26.80	29.00	89.875
7	29.00	29.00	28.60	29.00	28.75	99.125	99.125	13.00	12.80	11.50	12.00	11.75	12.50	12.75	26.80	29.00	90.00
8	29.00	29.00	28.60	29.00	28.75	98.875	98.875	13.00	12.80	11.50	12.00	11.75	12.50	12.75	26.80	29.00	90.125
9	29.00	29.00	28.60	29.00	28.75	98.875	98.875	13.00	12.80	11.50	12.00	11.75	12.50	12.75	26.80	29.00	90.125
12	29.00	29.50	28.85	29.00	29.00	99.00	99.00	13.00	12.80	11.50	12.00	11.75	12.50	12.75	26.80	29.00	90.125
13	29.00	29.50	28.85	29.00	29.00	98.875	98.875	13.00	12.80	11.50	12.00	11.75	12.50	12.75	26.80	29.00	90.125
14	29.00	29.50	28.85	29.00	29.00	98.875	98.875	13.00	12.80	11.50	12.00	11.75	12.50	12.75	26.80	29.00	90.125
15	29.00	29.50	28.85	29.00	29.00	98.875	98.875	13.00	12.80	11.50	12.00	11.75	12.50	12.75	26.80	29.00	90.125
16	29.00	29.50	28.85	29.00	29.00	99.375	99.375	13.00	12.80	11.50	12.00	11.75	12.50	12.75	26.80	29.00	90.125
19	29.00	29.50	28.85	29.00	29.00	99.625	99.50	13.00	12.80	11.50	12.00	11.75	12.50	12.75	26.80	29.00	90.125
20	29.00	29.50	28.85	29.00	29.00	99.875	99.75	13.00	12.80	11.50	12.00	11.75	12.50	12.75	26.80	29.00	90.375
21	29.00	29.50	28.85	29.00	29.00	99.875	99.75	12.00	11.80	11.50	12.00	11.75	12.50	12.75	26.80	29.00	90.375
22	29.00	29.50	28.85	29.00	29.00	99.75	99.625	12.00	11.80	11.50	12.00	11.75	12.50	12.75	26.80	29.00	90.375
23	29.00	29.50	28.85	29.00	29.00	99.75	99.625	12.00	11.80	11.50	12.00	11.75	12.50	12.75	26.80	29.00	90.375
26	29.00	29.00	28.85	29.00	29.25	99.875	99.75	12.00	11.80	11.50	12.00	11.75	12.50	12.75	26.80	29.00	90.375
27	29.00	29.50	28.85	29.00	29.25	100.00	99.875	12.00	11.80	11.50	12.00	11.75	12.50	12.75	26.80	29.00	90.375
28	29.00	30.00	29.10	29.00	29.375	100.25	100.125	12.00	11.80	11.50	12.00	11.75	12.50	12.75	26.80	29.00	90.375
29	29.00	30.00	29.10	29.00	29.375	100.75	100.625	12.00	11.80	11.50	12.00	11.75	12.50	12.75	26.80	29.00	90.375
30	29.00	30.00	29.10	29.00	29.375	100.75	100.625	12.00	11.80	11.50	12.00	11.75	12.50	12.75	26.80	29.00	90.375
AV.	**29.00**	**29.429**	**28.814**	**29.00**	**29.006**	**99.411**	**95.351**	**12.619**	**12.419**	**11.50**	**12.00**	**11.75**	**12.50**	**12.75**	**26.80**	**29.00**	**90.19**
HI.	**29.00**	**30.00**	**29.10**	**29.00**	**29.375**	**100.75**	**100.625**	**13.00**	**12.80**	**11.50**	**12.00**	**11.75**	**12.50**	**12.75**	**26.80**	**29.00**	**90.375**
LO.	**29.00**	**29.00**	**28.60**	**29.00**	**28.75**	**98.00**	**98.00**	**12.00**	**11.80**	**11.50**	**12.00**	**11.75**	**12.50**	**12.75**	**26.80**	**29.00**	**89.875**

* When split quotations prevail the daily average price is listed. The highs and lows for the month take into consideration the levels reached at both sides of such ranges.

United States Duties on Principal Ore and Metal Imports

(Including Revisions in Effect June 30, 1957, Under Geneva Agreements)

(Quantities Are in Pounds Unless Otherwise Stated; n.s.p.f. Stands for "Not Specially Provided For.")

COPPER

NOTE — The excise tax of 4c a pound on copper (which was reduced to 2c a pound by the Geneva Trade Agreement) was suspended in April, 1947, until March 31, 1949, and on expiration it was further suspended until June 30, 1950. The tax was reimposed on July 1, 1950. It was suspended again on May 22, 1951, retroactive to April 1, 1951, and until February 15, 1953, and again until June 30, 1954. Suspension further extended to June 30, 1955, and again until June 30, 1958. If import tax is restored, the 1956 Geneva Agreement provides for 5% reductions effective on June 30 of 1956, 1957 and 1958, provided the price is above 24c; if the price is below 24c the 2c tax would prevail.

Copper ore and concentrates, usable as flux, etc., copper content	1.70c lb.
Copper ore and concentrates, product of Cuba, copper content	free
Copper ore and concentrates, product of Philippines, copper content	0.17c lb.
Copper ore and concentrates, copper content	1.70c lb.
Regulus, black, or coarse copper, and cement copper, copper content	1.70c lb.
Unrefined black, blister, and converter copper in pigs or converter bars, copper content	1.70c lb.
Refined copper in ingots, plates or bars, copper content	1.70c lb.
Copper rolls, rods or sheets	1¼c lb. (plus 1.70c lb. ††)
Copper seamless tubes and tubing	3½c lb. (plus 1.70c lb. ††)
Copper plain wire	12½% (plus 1.70c lb. ††)
Copper brazed tubes†	4.50c lb. (plus 1.70c lb. ††)
Old and scrap copper, fit only for remanufacture: and scale and clippings, copper content	1.70c lb.

†† Copper content.

BRASS

Brass rods, sheets, plates, bars, strips, Muntz or yellow metal sheets, sheathing, bolts, piston rods, shafting and bronze rods, tubes and sheets	2c lb.
Brass tubes and tubing, seamless	2c lb.
Brass tubes, brazed, angles and channels	6c lb.
Brass and bronze wire	12½%

LEAD

NOTE — Import duties on lead-bearing ores, flue dust, and mattes of all kinds, lead bullion or base bullion, lead in pigs and bars, lead dross, reclaimed lead and antimonial lead were suspended February 12, 1952, and reimposed on June 26, 1952. Lead scrap duty was reimposed July 1, 1952.

Lead-bearing ores and mattes, n. s. p. f., lead content	¾c lb.
Bullion or base bullion, lead content	1 1/16c lb.
Pigs and bars, lead content	1 1/16c lb.
Reclaimed, scrap, dross, lead content	1 1/16c lb.
Babbitt metal and solder, lead content	1 1/16c lb.
Pipe, sheets, shot, glaziers' lead, and wire	1 5/16c lb.
Type metal and antimonial lead, lead content	1 1/16c lb.
White lead	1.05c lb.
Litharge	1¼c lb.
Red lead	15/16c lb.
Orange mineral	1c lb.

ZINC

NOTE — Import duties on zinc-bearing ores, and on zinc in blocks, pigs and slabs were suspended February 12, 1952, and reimposed on July 24, 1952. Tax on old zinc and dross and skimmings reimposed July 1, 1953.

Zinc-bearing ores, except pyrites containing not more than 3% zinc, zinc content	6/10c lb.
Zinc contained in zinc-bearing ores, n. e. s., not recoverable, zinc content	6/10c lb.
Zinc, old and worn out, fit only for remanufacture	¾c lb.
Dross and skimmings	¾c lb.
Zinc in blocks, pigs or slabs	7/10c lb.
Zinc in sheets	1c lb.
Zinc sheets, plated with nickel or other base metal, or solutions	1⅛c lb.
Zinc dust	7/10c lb
Zinc die-casting alloys	12½%
Zinc oxide and leaded zinc oxides containing not more than 25% lead, dry	3/5c lb.
ground in or mixed with oil or water	1c lb.

MISCELLANEOUS METALS AND ORES

Aluminum, metal and alloys, crude, except alloys elsewhere provided for†	1.25c lb.
Aluminum scrap	free
Aluminum plates, sheets, bars, rods, circles, squares, etc.†	2.50c lb.
Antimony ore, antimony content	free
Antimony metal and regulus	2c lb
Antimony needle or liquidated	¼c lb
Antimony oxide	1c lb
Antimony sulphides	½c lb. & 12½%
Arsenic, metallic†	2.50c lb.
Arsenious acid or white arsenic	free
Bauxite, crude*	free
Bauxite, refined**	¼c lb
Bismuth	1⅞%
Bismuth salts and compounds	35%
Beryllium metal†	21%
Beryllium ore	free
Cadmium	3¾c lb.
Cadmium flue dust, cadmium content	free
Chrome ore or chromite	free
Chrome or chromium metal†	10½%
Cobalt metal	free
Cobalt ore and concentrates, cobalt content	free
Magnesium, metallic†	50%
Magnesium powder, sheets, wire†	17c lb. & 8½%
Magnesium alloys	20c lb. & 10%
Magnesium scrap	free
Manganese ores, containing over 10% manganese, manganese content	¼c lb., except Cuba, free
Molybdenum ore or concentrates, molybdenum content†	30c lb.
Nickel ore, matte and oxide	free
Nickel and alloys, nickel chief value, n. s. p. f., in pigs, ingots, shot, cubes, grains, cathodes, or similar forms	1¼c lb.
Nickel, bars, rods, plates, sheets, castings, strips, wire or electrodes	12½%
Nickel scrap	free
Nickel tubes, tubing	6¼% (if cold rolled, drawn or worked — 2½% extra)
Platinum, grain, nuggets, sponge and scrap, oz. troy	free
Platinum in ingots, bars, sheets, or plates, not less than ⅛ in. thick, oz. troy	free
Platinum, ores, platinum content, oz. troy	free
Quicksilver or mercury	25c lb.
Selenium and salts	free
Tantalum	12½%
Tin ore, cassiterite, and black oxide of tin, tin content	free
Tin in bars, blocks, pigs, grain, granulated, and scrap, and alloys, chief value tin, n. s. p. f.	free
Tungsten ore or concentrates, tungsten content	50c lb.

***Crude bauxite import duty suspended through July 15, 1960. **Under Public Law 25 alumina imported for use in aluminum production is free for entries from July 17, 1956 through July 15, 1960. †Tariff reduced 5% on June 30, 1958, under Geneva Agreement which expires on June 30, 1959.**

Copper Statistics Reported by Copper Institute

Combined Totals in U. S. A. and Outside U. S. A.

(In tons of 2,000 pounds)

	Crude Production		Refined	Deliveries to	Refined Stock	Stock Increases or Decreases		
	Primary	Secondary	Production	Customers	End of Period	Blister	Refined	Total
1957								
Total	2,897,719	123,270	3,035,588	2,853,307	458,340	—14,599	+103,920	+89,321
1958								
January	251,064	14,317	261,853	259,878	448,900	+ 3,528	— 9,440	— 5,912
February	230,716	6,506	247,562	224,709	469,747	—10,340	+20,847	+10,507
March	247,942	8,972	259,157	229,941	493,326	— 2,243	+23,579	+21,336
April	215,461	11,946	226,895	210,412	501,166	+ 512	+ 7,840	+ 8,352
May	218,387	11,190	225,771	212,993	498,516	+ 3,806	— 2,650	+ 1,156
June	214,283	11,414	228,387	240,825	476,823	— 2,540	—21,963	—24,233
July	216,315	9,516	229,578	220,801	475,164	— 3,747	— 1,659	— 5,406
August	224,673	9,474	217,914	247,116	436,476	+16,233	—38,688	—22,455
September	202,719	7,960	204,006	254,667	374,180	+ 6,673	—60,948	—54,275
October	204,938	20,613	192,199	292,630	269,654	+33,352	+105,126	—71,774
November	227,916	17,755	230,109	261,097	236,774	+15,562	—32,880	—17,318
December	253,512	8,883	282,191	260,841	258,874	—19,796	+22,100	+ 2,304
Total	2,707,926	138,696	2,805,622	2,916,588	258,874	+41,000	—199,466	—158,466
1959								
January	260,378	12,260	270,858	248,432	280,880	+ 1,780	+22,006	+23,786
In U. S. A.								
1957								
December	95,285	8,613	136,135	84,446	181,024	.....	+19,472	.....
Total	1,116,380	112,060	1,616,964	1,277,946	181,024	.....	+60,379	.....
1958								
January	94,735	13,855	136,748	110,557	176,287	.....	— 4,737	.....
February	87,130	6,222	128,299	93,784	201,223	.....	+24,936	.....
March	90,366	8,607	130,075	78,683	238,641	.....	+37,418	.....
April	86,123	11,475	120,467	81,930	251,099	.....	+12,458	.....
May	80,628	10,488	115,978	78,631	253,463	.....	+ 2,364	.....
June	71,092	10,980	107,918	100,796	244,450	.....	— 8,013	.....
July	64,444	8,858	110,130	77,523	242,781	.....	— 2,669	.....
August	67,917	8,999	100,640	86,982	215,560	.....	—27,221	.....
September	79,541	7,259	107,971	101,971	178,222	.....	—37,338	.....
October	92,214	19,865	113,288	120,793	128,490	.....	—49,732	.....
November	96,369	16,755	128,048	131,188	93,596	.....	—34,894	.....
December	97,641	7,911	146,978	116,310	80,722	.....	—100,302	.....
Total	1,008,170	131,294	1,446,540	1,179,416	00,722	.....	—12,874	.....
1959								
January	98,356	11,167	137,361	114,425	80,780	.....	+ 58	.....
Outside U. S. A.*								
1957								
December	149,898	625	128,137	133,901	277,316	.....	+12,067	.....
Total	1,783,119	11,210	1,418,624	1,575,361	277,316	.....	+43,541	.....
1958								
January	156,329	462	125,105	149,321	272,613	.....	— 4,703	.....
February	143,586	284	119,263	130,925	268.524	.....	— 4,089	.....
March	157,606	365	129,082	151,258	254,685	.....	—13,839	.....
April	129,338	471	106,428	128,482	250,067	.....	— 4,618	.....
May	137,759	702	109,793	134,302	245,053	.....	— 5,014	.....
June	143,191	584	120,469	140,029	231,373	.....	—13,680	.....
July	151,871	658	119,448	143,278	232,383	.....	+ 1,010	.....
August	156,756	475	117,274	160,134	220,916	.....	—11,467	.....
September	123,178	701	96,035	153,633	196,558	.....	—23,610	.....
October	112,724	748	78,911	171,827	141,164	.....	—55,394	.....
November	131,334	980	102,061	129,909	143,178	.....	+ 2,014	.....
December	155,871	972	135,213	144,531	178,152	.....	+34,974	.....
Total	1,699,756	7,402	1,359,082	1,737,172	178,152	.....	—99,164	.....
1959								
January	162,022	1,093	133,497	134,007	200,100	.....	+21,948	.....

* Excluding Russia, Yugoslavia, Norway, Sweden, Japan and Australia.

Electrolytic Copper
Producers' Price, Del. Valley
Monthly Average Prices
(Cents Per Pound)

	1956	1957	1958	1959
Jan.	43.00	36.00	25.69	29.00
Feb.	44.03	33.318	25.00	....
Mar.	46.00	32.00	25.00	....
Apr.	46.00	32.00	25.00	....
May	46.00	32.00	25.00	....
June	46.00	30.955	25.36	....
July	41.56	29.25	26.125	....
Aug.	40.00	28.639	26.50	....
Sept.	40.00	27.031	26.50	....
Oct.	39.308	27.00	27.548	....
Nov.	36.00	27.00	29.00	....
Dec.	36.00	27.00	29.00	....
Aver.	**41.992**	**30.183**	**26.31**	....

Electrolytic Copper
Custom Smelters' Price, Del. Valley
Monthly Average Prices
(Cents Per Pound)

	1956	1957	1958	1959
Jan.	50.22	34.87	24.577	29.429
Feb.	52.07	32.273	23.557	....
Mar.	53.11	30.952	23.326	....
Apr.	48.88	31.24	23.66	....
May	44.221	30.163	23.865	....
June	40.00	29.60	25.52	....
July	38.14	28.39	29.231	....
Aug.	39.32	27.862	26.52	....
Sept.	39.00	25.948	26.355	....
Oct.	37.192	25.722	28.577	....
Nov.	35.95	25.435	29.829	....
Dec.	35.45	25.26	28.846	....
Aver.	**42.797**	**28.93**	**25.905**	....

Lake Copper
Producers' Price Delivered
Monthly Average Prices
(Cents Per Pound)

	1956	1957	1958	1959
Jan.	43.00	36.00	25.69	29.00
Feb.	43.783	33.182	25.00	....
Mar.	46.00	32.00	25.00	....
Apr.	46.00	32.00	25.00	....
May	46.00	32.00	25.00	....
June	46.00	30.955	25.00	....
July	41.68	29.25	25.75	....
Aug.	40.00	28.611	26.50	....
Sept.	40.00	27.00	26.50	....
Oct.	39.321	27.00	27.577	....
Nov.	36.00	27.00	29.00	....
Dec.	36.00	27.00	29.00	....
Aver.	**41.975**	**30.162**	**26.251**	....

Fabricators' Copper Statistics

(In tons of 2,000 pounds)

	Fabricators' Stocks of Refined Cop.	Unfilled Purchases of Refined by Fab. from Producers	Fabricators' Working Stocks	Unfilled Sales by Fabricators to Customers	Actual Copper Consmd. by Fabricators	Excess Fabricators' Stocks Over Orders Bkd.
1952						
Total	331,499	32,652	292,157	275,608	1,391,477	—203,614
1953						
Total	380,881	25,022	309,664	170,917	1,375,869	— 74,678
1954						
Total	360,526	58,125	304,619	136,581	1,231,840	— 22,549
1955						
Total	.....	.....	.....	.....	1,418,241	.....
1956						
June	451,126	114,223	324,970	227,097	113,835	+ 13,282
July	465,015	109,040	334,584	220,810	81,275	+ 18,661
Aug.	457,679	115,295	338,818	221,975	117,427	+ 12,181
Sept.	445,679	114,981	338,488	204,154	115,867	+ 18,018
Oct.	440,706	112,893	336,856	198,517	119,440	+ 18,226
Nov.	435,216	110,792	335,829	178,814	119,441	+ 31,366
Dec.	437,187	117,601	336,217	183,834	99,223	+ 34,737
Total	.....	.....	.....	.....	1,416,378	.....
1957						
Jan.	435,635	107,231	335,944	178,326	119,517	+ 28,596
Feb.	422,266	110,174	334,542	178,913	114,298	+ 18,985
Mar.	429,410	104,551	338,454	164,623	106,170	+ 30,884
Apr.	429,708	98,638	335,921	164,410	117,041	+ 28,015
May	434,852	92,943	336,697	170,476	115,355	+ 20,622
June	426,905	82,919	340,743	153,042	110,527	+ 16,039
July	432,918	85,728	341,684	144,410	77,991	+ 32,552
Aug.	429,627	82,768	344,315	144,375	110,323	+ 23,826
Sept.	425,168	80,436	344,530	144,538	106,927	+ 16,536
Oct.	420,130	80,774	341,869	138,420	119,161	+ 20,615
Nov.	428,520	68,249	345,832	128,719	98,725	+ 22,218
Dec.	430,171	75,627	347,465	138,631	83,067	+ 19,702
Total	.....	.....	.....	.....	1,279,086	.....
1958						
Jan.	445,514	57,917	348,426	123,756	94,642	+ 31,249
Feb.	452,673	52,342	351,035	128,330	86,625	+ 25,650
Mar.	448,125	71,693	346,875	141,387	83,694	+ 31,556
Apr.	450,442	76,602	347,607	145,623	79,613	+ 33,814
May	441,001	78,194	346,404	138,190	88,447	+ 34,601
June	433,526	72,383	330,301	145,162	109,011	+ 30,448
July	431,796	77,362	326,263	153,529	79,353	+ 29,366
Aug.	421,931	78,194	323,667	150,436	96,717	+ 26,022
Sept.	416,887	71,025	319,281	145,390	105,474	+ 28,941
Oct.	399,113	91,019	315,929	156,692	138,017	+ 17,511
Nov.	419,914	88,580	328,238	157,799	110,487	+ 22,457
Dec.	447,123	90,401	326,438	177,869	92,573	+ 35,217
Total	....	....	....	....	1,165,364	....

Scrap Copper Receipts by Custom Smelters and Refineries in United States*

(In Short Tons)

	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
Jan.	15,763	6,640	4,528	6,486	9,859	11,047	14,322	17,506	16,024	14,511
Feb.	12,500	5,153	3,633	10,337	8,490	15,198	14,497	11,145	9,518	....
Mar.	13,538	7,912	5,243	19,991	9,738	12,198	15,921	13,934	11,783	....
Apr.	12,304	8,553	6,214	16,588	9,004	13,162	17,233	14,288	15,279	....
May	8,749	8,458	8,033	10,857	8,687	15,133	20,805	12,397	13,989	....
June	20,523	8,628	4,425	10,945	13,309	14,765	14,758	11,949	13,945	....
July	10,040	6,642	5,188	9,063	10,260	9,988	12,632	8,926	12,185	....
Aug.	10,452	6,113	5,003	7,137	10,100	12,197	12,510	11,645	11,896	....
Sept.	4,903	3,561	4,667	9,042	10,641	15,037	9,518	9,756	9,268	....
Oct.	9,459	3,336	4,602	10,065	11,662	12,897	15,570	13,151	23,088	....
Nov.	9,237	3,179	4,724	7,815	10,879	9,865	11,369	11,146	16,425	....
Dec.	7,178	4,538	6,208	11,476	14,876	13,180	14,613	11,237	10,796	....
Total	142,067	71,812	62,470	129,798	127,449	154,714	173,748	147,080	164,196	....

* As compiled by Copper Intitute.

Brass and Bronze Ingot Monthly Shipments

(NET TONS

The following figures showing the combined shipments of ingot brass and bronze are compiled by the Ingot Brass and Bronze Industry and represen tin excess of 95 per cent of the deliveries of the entire industry.

	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
Jan.	19,466	18,674	28,416	28,315	23,423	20,661	25,201	27,736	25,681	20,468	....
Feb.	15,026	18,487	27,168	24,211	25,429	19,920	25,349	24,949	20,769	17,413	....
Mar.	14,550	22,494	31,997	23,890	28,256	23,653	29,713	28,310	21,948	18,825	....
Apr.	10,695	22,118	30,473	22,547	25,044	24,746	27,641	25,808	23,507	18,009	....
May	11,114	23,443	33,267	21,740	21,660	22,269	23,708	23,437	22,037	17,191	....
June	9,696	25,093	33,817	21,274	20,818	22,348	23,141	18,842	18,888	17,962	....
July	10,220	21,409	32,016	18,947	19,321	17,074	18,513	17,364	16,695	16,658	....
Aug.	14,194	29,689	25,285	21,807	20,156	21,684	27,013	23,812	19,654	17,882	....
Sept.	16,208	28,811	22,285	22,770	21,463	22,464	26,349	20,929	19,670	20,540	....
Oct.	18,026	32,240	23,124	25,811	22,280	24,080	25,228	23,045	22,800	23,225	....
Nov.	18,488	31,748	23,544	23,441	21,806	23,061	25,102	21,818	19,767	20,758	....
Dec.	17,950	28,575	20,987	22,983	20,541	21,274	21,448	18,046	16,875	18,676	....
Total	175,643	303,563	332,378	277,736	271,251	263,233	298,406	274,096	248,297	227,607	....
Aver.	14,637	25,297	27,615	23,145	22,694	21,936	24,867	22,841	20,681	18,133	....

Mine Production of Copper in United States

(U. S. Bureau of Mines)

(In short tons)

	Eastern	Missouri	Western	Total
1956				
Ttl.	79,681	2,130	1,018,496	1,100,307
1957				
June	7,793	129	82,398	90,320
July	6,101	154	78,502	84,757
Aug.	7,572	133	79,892	87,038
Sept.	6,083	132	79,623	85,338
Oct.	4,614	147	82,992	87,753
Nov.	7,063	70	80,848	87,981
Dec.	6,962	67	81,080	88,109
Ttl.	79,369	1,800	995,753	1,076,922
1958				
Jan.	7,615	164	82,476	90,255
Feb.	6,826	125	74,766	81,717
Mar.	7,517	123	79,594	87,234
April	7,035	161	76,911	84,107
May	6,522	152	71,717	78,391
June	5,801	155	62,296	68,252
July	4,188	132	56,672	61,222
Aug.	5,570	127	61,342	67,039
Sept.	5,312	114	77,561	82,987
Oct.	7,002	60	85,075	91,518
Nov.	6,617	60	87,379	94,056
Dec.	6,614	70	88,070	94,514
Ttl.	76,849	1,250	902,021	980,304

Average Custom Smelters' Scrap Buying Prices

(Cents per pound for carload lots del. consumers' works)

	No. 1 Copper Scrap	No. 2 Copper Scrap	Light Copper Scrap	Refinery Brass*
1957				
Nov.	21.293	19.793	17.543	19.10
Dec.	20.78	19.28	17.03	18.58
Av.	24.38	22.88	20.76	22.11
1958				
Jan.	19.44	17.94	15.69	17.70
Feb.	18.955	17.455	15.205	16.932
Mar.	19.21	17.71	15.46	16.92
Apr.	19.60	18.10	15.85	17.56
May	20.02	18.52	16.27	17.894
June	21.93	20.43	18.18	19.76
July	22.52	21.02	18.77	20.26
Aug.	22.62	21.12	18.87	20.12
Sept.	22.37	20.87	18.62	19.87
Oct.	24.80	23.30	21.05	22.30
Nov.	25.597	24.097	21.847	23.097
Dec.	24.356	22.856	20.606	21.856
Aver	21.788	20.282	18.035	18.047
1959				
Jan.	25.29	23.79	21.54	22.79

*Of dry content for material having a dry copper content in excess of 60%

Brass Ingot Makers' Scrap Copper Buying Prices

(Average Prices)

(Cents per pound del. refinery for 60,000 lbs. of each grade)

	No. 1 Copper Scrap	No. 2 Copper Scrap	No. 1 Composition	Heavy Yellow Brass
1957				
Nov.	21.293	19.793	19.043	12.913
Dec.	20.78	19.28	18.94	12.94
Av.	24.37	22.87	21.804	15.66
1958				
Jan.	19.44	17.94	17.77	12.19
Feb.	18.955	17.455	17.06	11.341
Mar.	19.21	17.71	17.274	11.88
Apr.	19.60	18.10	17.75	12.35
May	19.923	18.423	18.038	12.769
June	21.93	20.43	19.02	13.43
July	22.52	21.02	19.24	13.53
Aug.	22.62	21.12	19.11	13.80
Sept.	22.37	20.87	18.88	12.90
Oct.	24.80	23.30	20.51	14.938
Nov.	25.597	24.097	20.182	14.125
Dec.	24.356	22.856	19.038	13.038
Aver.	21.777	20.277	18.653	13.024
1959				
Jan.	25.29	23.79	19.70	13.982

Lead Statistics Reported by American Bureau of Metal Statistics

Lead Refineries in U. S. A. and Outside U. S. A.

(Recoverable Lead Content in Tons of 2,000 Pounds)

Combined U. S. A. and Outside U. S. A.

	REFINED PRODUCTION			DELIVERIES			STOCKS		
1958	Pig	Antimonial Lead Content	Total	Pig	Antimonial Lead Content	Total	Pig	Antimonial Lead Content	Total
Feb. ..	129,553	7,889	137,442	87,857	7,736	95,593	213,084	18,497	231,581
Mar. ..	130,088	8,950	139,038	103,730	8,131	111,861	228,567	19,316	247,883
Apr. ..	122,690	8,192	130,882	100,352	7,668	108,020	243,586	19,840	263,426
May ..	135,618	8,918	144,536	109,209	8,540	117,749	266,326	20,218	286,544
June ..	127,982	7,484	135,466	105,121	8,493	113,614	285,482	19,209	304,691
July ..	109,964	8,233	118,197	107,801	9,252	117,053	284,650	18,190	302,840
Aug. ..	103,701	8,973	112,674	102,898	9,903	112,801	284,818	17,260	302,078
Sept. ..	116,283	8,806	125,089	121,929	7,986	129,915	279,172	18,080	297,252
Oct. ..	121,934	10,656	132,590	139,698	9,408	149,106	262,510	19,328	281,838
Nov. ..	120,951	8,971	129,922	112,495	9,381	121,876	273,033	18,918	291,951
Dec. ..	129,461	10,898	140,359	90,498	8,583	99,081	313,232	21,233	334,465
Total ..	1,485,282	106,383	1,591,665	1,307,390	102,697	1,410,087	.....	.....	.....
U. S. A.									
1958									
Feb. ..	43,475	3,462	46,937	33,151	4,107	37,258	121,468	12,753	134,221
Mar. ..	39,893	3,374	43,267	52,291	3,845	56,136	140,337	12,830	153,167
Apr. ..	37,328	3,384	40,712	40,597	3,373	43,970	156,150	13,202	169,352
May ..	42,659	4,481	47,140	45,576	4,118	49,694	182,187	13,892	196,079
June ..	40,795	3,600	44,395	45,640	4,409	50,049	193,021	13,298	206,319
July ..	36,052	2,681	38,733	47,381	5,263	52,644	200,949	11,027	211,976
Aug. ..	34,275	4,890	39,165	50,145	4,956	55,101	201,759	11,150	212,909
Sept. ..	38,508	4,525	43,033	65,301	4,516	69,817	215,389	11,991	227,380
Oct. ..	40,225	5,153	45,378	70,580	4,455	75,035	207,335	12,728	220,063
Nov. ..	36,572	3,621	40,193	44,834	4,181	49,015	217,728	12,352	230,080
Dec ..	39,504	4,307	43,811	31,869	3,737	35,606	239,049	13,417	252,466
Total ..	473,208	46,985	520,193	589,528	49,893	639,421	.....	.....	.....
Outside U. S. A.									
1958									
Feb. ..	86,078	4,427	90,505	54,706	3,629	58,335	91,616	5,744	97,460
Mar. ..	90,195	5,576	95,771	51,439	4,286	55,725	88,230	6,486	94,716
Apr. ..	85,362	4,808	90,170	59,755	4,295	64,050	87,436	6,638	94,074
May ..	92,959	4,437	97,396	63,633	4,422	68,055	84,139	6,326	90,465
June ..	87,187	3,884	91,071	59,481	4,084	63,565	92,461	5,911	98,372
July ..	73,912	5,552	79,464	60,420	3,989	64,409	83,701	7,163	90,864
Aug. ..	69,426	4,083	73,509	52,753	4,947	57,700	83,059	6,110	89,169
Sept. ..	77,775	4,281	82,056	56,628	3,470	60,098	63,783	6,089	69,872
Oct. ..	81,709	5,503	87,212	69,118	4,953	74,071	55,175	6,600	61,775
Nov. ..	84,379	5,350	89,729	67,661	5,200	72,861	55,305	6,566	61,871
Dec. ..	89,957	6,591	96,548	58,629	4,846	63,475	74,183	7,816	81,999
Total ..	1,012,074	59,398	1,071,472	717,862	52,804	710,666	.....	.....	.....

Summary of Lead Statistics for United States

Recoverable Lead Content in Tons of 2000 Pounds	Stocks (end of period) — Base Bullion — Raw Material at Smelter	At Smelter & Transit	At Refinery and Process	Refined Pig and Antimonial	Total	Smelter Receipts — Primary Origin — U.S.A.'	Outside U.S.A.	Scrap	Total
1958									
February	76,739	4,264	31,876	134,221	247,100	24,888	16,605	1,938	43,431
March	80,664	5,493	29,152	153,167	268,476	23,647	19,735	2,368	45,750
April	83,496	5,359	29,141	169,352	287,348	25,668	16,738	1,952	44,358
May	76,981	5,785	27,472	196,079	306,317	28,637	10,445	1,971	41,053
June	77,858	4,420	28,254	206,319	316,851	30,230	14,022	1,315	45,567
July	81,103	4,848	30,065	211,976	327,992	23,440	19,665	1,629	44,734
August	78,261	6,461	33,863	212,909	331,494	26,427	13,145	1,282	40,854
September	74,100	5,893	32,606	227,380	339,979	24,718	14,937	1,718	41,373
October	63,630	6,401	29,833	220,063	319,927	22,405	9,205	3,713	35,323
November	64,821	4,721	30,208	230,080	329,830	26,179	15,932	3,954	46,065
December	72,638	7,038	28,955	252,466	361,097	28,409	18,921	4,165	51,495
Total	.....	....	.....	.....	.....	311,375	191,415	29,312	532,102

	Smelter Production	Refined Productions — Pig	Antimonial	Total	Deliveries to U. S. Fabricators from sources reporting imports — Pig	Antimonial	Total
1958							
February	42,875	43,475	3,462	46,937	33,151	4,107	37,258
March	40,971	39,893	3,374	43,267	52,291	3,845	56,136
April	40,499	37,328	3,384	40,712	40,597	3,373	43,970
May	46,653	42,659	4,481	47,140	45,576	4,118	49,694
June	43,662	40,795	3,600	44,395	45,640	4,409	50,049
July	40,328	36,052	2,681	38,733	47,381	5,263	52,644
August	42,766	34,275	4,890	39,165	50,145	4,956	55,101
September	44,595	38,508	4,525	43,033	65,301	4,516	69,817
October	45,144	40,225	5,153	45,378	70,580	4,455	75,035
November	44,163	36,572	3,621	40,193	44,834	4,181	49,015
December	42,834	39,504	4,307	43,811	31,869	3,737	35,606
Total	524,941	473,208	46,985	520,193	589,528	49,893	639,421

United States Lead Statistics of Primary Refineries

(American Bureau of Metal Statistics)
(In tons of 2,000 lbs.)

	Stock At Beginning	Production Primary & Secondary	Total Supply	Stock At End	Domestic Shipments
1954	81,152	551,618	632,770	92,719	475,551
1955	28,855	547,153	639,872	31,089	531,339
1956					
Total	....	613,293	644,382	....	529,484
1957					
March	48,699	52,357	101,056	46,184	38,225
April	46,184	56,170	102,354	57,444	37,583
May	57,444	51,718	109,162	58,085	35,334
June	58,085	48,203	106,288	64,861	37,257
July	64,861	47,100	111,961	68,009	38,582
August	68,009	48,191	116,200	60,633	49,406
September	60,633	50,436	111,069	54,682	51,859
October	54,682	52,041	106,723	59,041	40,447
November	59,041	48,771	107,812	70,874	32,193
December	70,874	50,500	121,374	91,598	24,108
Total	....	604,353	645,534	....	463,060
1958					
January	91,598	47,665	139,263	101,206	33,422
February	101,206	47,133	148,339	119,522	23,832
March	119,522	43,441	162,963	128,754	28,885
April	128,754	40,984	169,738	143,136	22,172
May	143,136	47,487	190,623	155,121	30,021
June	155,121	44,636	199,757	163,504	32,078
July	163,504	38,827	202,331	164,860	31,948
August	164,860	39,520	204,380	169,302	34,254
September	169,302	43,269	212,571	170,666	41,657
October	170,666	45,467	216,133	169,435	46,647
November	169,435	40,485	209,920	179,321	30,591
December	179,321	44,042	223,363	198,538	24,852
Total	....	522,956	614,554	....	380,359

In instances where the figures are not in balance it is due to shipments to other than domestic consumers.

Industrial Classification of Domestic Lead Shipments

(American Bureau of Metal Statistics) (In tons of 2,000 lbs.)

	Cable	Amm.	Foil	Batt'y	Brass Making	Sundries	Jobbers	Unclassified
1955								
Total	72,418	27,599	2,622	88,461	3,960	52,994	13,034	270,251
1956								
June	8,502	2,150	...	4,167	186	3,645	1,021	21,787
July	3,497	904	...	5,007	80	2,859	1,453	22,683
Aug.	7,712	1,497	85	6,334	713	4,443	1,262	26,358
Sept.	6,354	1,850	135	6,303	230	5,038	1,339	26,270
Oct.	7,988	1,715	135	7,108	286	4,955	1,493	21,574
Nov.	6,096	2,351	....	8,556	226	5,573	792	23,755
Dec.	6,440	1,449	85	5,832	160	7,258	394	22,573
Total	80,360	24,501	1,435	70,614	3,158	56,851	13,213	274,716
1957								
Jan.	5,297	2,800	200	6,886	671	4,002	1,191	19,502
Feb.	5,103	1,450	350	6,549	508	4,820	625	18,112
Mar.	5,956	752	...	6,479	686	4,614	1,064	18,674
April	6,731	2,250	....	6,242	909	2,958	1,040	17,453
May	6,976	2,200	120	4,705	270	3,871	634	16,558
June	3,726	2,250	75	3,762	666	5,071	1,087	20,620
July	5,249	1,650	105	5,332	566	5,310	1,110	19,260
Aug.	5,406	2,250	220	6,165	650	6,246	1,403	27,066
Sept.	4,880	2,700	295	6,722	850	5,782	891	29,739
Oct.	3,671	3,300	205	5,973	881	4,203	847	21,367
Nov.	2,950	2,500	85	3,126	493	3,800	706	18,533
Dec.	2,499	1,350	36	2,820	270	2,607	529	13,997
Total	58,444	25,452	1,691	64,761	7,420	53,284	11,127	240,881
1958								
Jan.	2,938	550	70	4,775	521	5,173	801	18,594
Feb.	2,899	1,750	70	5,124	90	1,643	888	11,368
Mar.	3,133	1,200	35	4,711	681	3,149	908	15,068
April	3,207	900	70	3,138	580	2,831	533	10,913
May	3,216	1,850	35	4,671	866	3,071	1,027	15,285
June	3,463	1,950	35	2,767	480	4,217	1,716	17,450
July	3,169	1,250	275	3,936	515	4,157	1,052	17,594
Aug.	3,481	2,415	70	4,992	400	6,399	100	16,397
Sept.	4,132	2,290	320	5,775	848	6,771	1,747	19,774
Oct.	3,243	2,450	...	4,548	285	6,210	1,641	28,270
Nov.	3,690	2,150	50	6,527	360	4,887	822	12,105
Dec.	2,267	2,100	50	6,216	215	2,578	652	10,774
Total	38,838	20,855	1,080	57,180	5,841	51,086	11,882	193,592

Lead Prices at New York

(Common Grade)
Monthly Average Prices
(Cents per pound)

	1956	1957	1958	1959
Jan.	16.16	16.00	13.00	12.619
Feb.	16.00	16.00	13.00	....
Mar.	16.00	16.00	13.00	....
Apr.	16.00	16.00	12.00	....
May	16.00	15.385	11.712	....
June	16.00	14.32	11.24	....
July	16.00	14.00	11.00	....
Aug.	16.00	14.00	10.85	....
Sept.	16.00	14.00	10.89	....
Oct.	16.00	13.704	12.673	....
Nov.	16.00	13.50	13.00	....
Dec.	16.00	13.00	13.00	....
Aver.	16.013	14.66	12.114	....

Lead Sheet Prices

(To Jobbers, Full Sheets)
Monthly Average Prices)
(Cents per pound)

	1956	1957	1958	1959
Jan.	21.66	21.50	18.50	18.119
Feb.	21.50	21.50	18.50	....
Mar.	21.50	21.50	18.50	....
Apr.	21.50	21.50	17.50	....
May	21.50	20.885	17.212	....
June	21.50	19.82	16.74	....
July	21.50	19.82	16.50	....
Aug.	21.50	19.50	16.35	....
Sept.	21.50	19.50	16.39	....
Oct.	21.50	19.204	18.173	....
Nov.	21.50	19.00	18.50	....
Dec.	21.50	18.50	18.50	....

Battery Shipments

The following table shows replacement battery shipments in the United States as compiled by the Business Information Division of Dun & Bradstreet, Inc., for the Association of American Battery Manufacturers:

(In thousands of units)

	1955	1956	1957	1958
Jan.	1,518	2,058	2,638	2,004
Feb.	1,691	1,340	1,961	1,803
Mar.	1,356	1,348	1,254	1,577
Apr.	1,315	1,368	1,178	1,242
May	1,614	1,761	1,605	1,454
June	1,842	1,807	1,878	1,773
July	2,078	2,178	2,469	2,101
Aug.	2,852	2,571	2,856	2,333
Sept.	3,120	2,711	2,688	2,704
Oct.	3,120	3,015	3,042	2,976
Nov.	2,697	2,592	2,359	2,262
Dec.	2,625	2,265	2,015	3,036
Total	25,828	25,014	25,943	25,265

Lead Stocks at Primary U. S. Smelters and Refiners

(American Bureau of Metal Statistics)
(In tons of 2,000 lbs.)

	In ore and matte and in process at smelters	— In base bullion (lead content) — At smelters & refineries	In transit to refineries	In process at refineries	Refined pig lead	Anti-monial lead	Total Stocks
1956							
Nov. 1	78,253	12,022	3,083	25,783	30,932	11,382	161,485
Dec. 1	82,197	9,095	4,132	25,627	25,360	11,832	158,243
1957							
Jan. 1	77,918	12,222	2,846	25,092	29,435	11,746	159,249
Feb. 1	80,451	10,636	4,061	25,827	32,418	10,487	163,880
Mar. 1	81,274	11,880	4,394	25,728	38,479	10,220	171,975
Apr. 1	82,461	14,598	3,593	25,401	36,390	9,794	172,237
May 1	81,061	17,035	2,705	20,890	48,053	9,391	179,135
June 1	81,364	11,585	3,071	21,002	48,286	9,799	175,107
July 1	82,730	12,036	3,560	22,380	55,358	9,503	185,567
Aug. 1	97,111	11,479	2,532	22,917	59,348	8,661	202,048
Sept. 1	84,205	13,029	2,667	22,439	51,080	9,553	182,973
Oct. 1	80,662	11,905	3,175	20,351	44,467	10,215	170,775
Nov. 1	76,230	14,220	2,538	18,695	47,460	11,581	170,724
Dec. 1	65,341	11,646	3,547	21,867	59,755	11,119	173,275
1958							
Jan. 1	79,362	11,019	2,779	23,154	79,741	11,857	207,912
Feb. 1	79,738	11,510	3,678	24,535	88,517	12,689	220,667
Mar. 1	79,588	9,546	3,670	22,834	107,213	12,309	235,250
Apr. 1	83,185	10,692	2,187	21,766	116,610	12,144	246,584
May 1	86,053	11,838	2,138	20,524	130,668	12,468	263,689
June 1	79,482	11,059	2,010	20,188	141,967	13,154	267,860
July 1	80,060	9,012	1,570	22,092	150,648	12,856	276,238
Aug. 1	83,347	12,438	860	21,615	154,378	10,482	283,379
Sept. 1	80,561	15,496	1,176	20,444	158,413	10,889	286,979
Oct. 1	76,534	15,111	2,854	18,125	159,662	11,004	283,290
Nov. 1	66,586	12,926	1,280	19,041	157,385	12,050	269,268
Dec. 1	67,559	11,102	2,683	20,941	167,493	11,828	281,606
1959							
Jan. 1	77,032	13,367	1,866	19,746	185,913	12,595	310,519

Receipts of Lead in Ore and Scrap

By U. S. Smelters (a)

(American Bureau of Metal Statistics) (In tons of 2,000 lbs.)

	——Receipts of lead in ore—— United States	Foreign	Total	Receipts of lead in scrap etc. (b)	Total receipts in ore, & scrap
1952 Total	405,990	98,276	504,266	41,845	546,111
1953 Total	351,183	155,788	506,971	42,994	549,965
1954 Total	336,291	158,081	494,372	49,864	544,236
1955 Total	341,595	172,966	514,561	42,996	557,557
1956					
November	30,553	14,308	44,861	5,141	50,002
December	31,154	15,095	46,252	4,536	50,788
Total	368,499	192,318	560,817	55,925	616,792
1957					
January	30,632	19,961	50,593	4,471	55,064
February	31,410	15,059	46,469	4,564	51,033
March	33,445	18,813	52,258	3,058	55,316
April	31,343	13,042	44,385	2,848	47,233
May	32,138	12,324	44,462	3,431	47,893
June	29,896	19,592	49,488	2,272	51,760
July	29,585	17,936	47,521	2,893	50,414
August	29,225	18,774	47,999	3,190	51,189
September	26,479	13,757	40,236	4,375	44,611
October	29,342	13,782	43,124	4,386	47,510
November	25,809	17,251	43,060	3,258	46,318
December	27,105	26,610	53,715	3,791	57,506
Total	356,409	206,901	563,310	42,537	605,847
1958					
January	25,537	22,097	47,634	3,507	51,141
February	23,789	16,400	40,189	2,184	42,373
March	21,735	20,038	41,773	3,154	44,927
April	25,104	15,821	40,925	1,913	42,838
May	27,427	10,228	37,655	1,867	39,522
June	28,577	13,811	42,388	1,366	43,754
July	22,289	19,692	41,891	1,615	43,596
August	25,075	13,043	38,118	1,265	39,383
September	23,228	14,576	37,804	1,810	39,614
October	21,099	9,093	30,192	3,591	33,783
November	26,314	14,541	40,855	4,018	44,873
December	26,865	18,804	45,669	4,057	49,726
Total	297,039	188,144	485,183	30,347	515,530

(a) Receipts of lead in ore are computed on the basis of recoverable lead. Owing to the estimational factor in this, which is probably on the low side, and also to the possibility that some lead receipts may escape attention, these monthly totals probably underrun the actual production of pig lead. (b) inclusive only of scrap smelted in connection with ore, plus some scrap received by primary refiners.

N. Y. Lead Price Changes

(Effective Date)

1950		Mar. 9	12.75
Sept. 8	16.00	Mar. 10	13.00
Oct. 31	17.00	Mar. 26	13.25
1951		Mar. 29	13.50
Oct. 2	**19.00	Apr. 1	13.75
1952		Apr. 12	14.00
Apr. 29	18.00	June 2	14.25
May 2	17.00	June 15	14.00
May 12	15.00	Aug. 25	14.25
June 23	15.50	Sept. 7	14.50
June 24	16.00	Sept. 15	14.75
Oct. 7	15.00	Oct. 4	14.875
Oct. 14	14.00	Oct. 5	15.00
Oct. 22	13.50	1955	
Nov. 3	14.00	Sept. 23	15.00-15.50
Nov. 10	14.20	Sept. 26	15.50
Nov. 11	14.50	Dec. 29	16.00
Nov. 20	14.25	1956	
Nov. 24	14.00	Jan. 4	16.50
Dec. 22	14.25	Jan. 13	16.00
Dec. 29	14.50	1957	
Dec. 31	14.75	May 9	15.50
1953		May 16	15.00
Jan. 7	14.50	June 11	14.00
Jan. 12	14.00	Oct. 14	13.50
Feb. 2	13.50	Dec. 2	13.00
Mar. 4	13.00	1958	
Mar. 10	13.50	Apr. 1	12.00
Apr. 7	13.00	May 14	11.50
Apr. 16	12.50	June 3	11.00
Apr. 21	12.00	June 18	11.50
Apr. 29	12.50	July 1	11.00
May 18	12.75	Aug. 13	10.75
May 19	13.00	Sept. 17	11.00
May 26	13.15	Sept. 30	11.50
June 11	13.50	Oct. 2	12.00
July 20	13.75	Oct. 8	12.50
July 23	14.00	Oct. 14	13.00
Sept. 16	13.50	1959	
1954		Jan. 21	12.00
Jan. 18	13.00	Feb. 11	11.50
Feb. 18	12.50		

**OPS Ceiling.

Antimonial Lead Stocks at Primary Refineries

(A.B.M.S.)

(In tons of 2,000 lbs.)

End of.	1955	1956	1957	1958
Jan.	14,902	8,389	10,487	12,689
Feb.	12,204	9,095	10,220	12,309
Mar.	12,385	10,289	9,794	12,144
Apr.	11,740	10,690	9,391	12,468
May	11,055	10,902	9,799	13,154
June	10,233	9,452	9,503	12,856
July	9,779	10,924	8,661	10,482
Aug.	7,252	10,074	9,553	10,889
Sept.	7,461	11,181	10,215	11,004
Oct.	8,085	11,382	11,581	12,050
Nov.	9,263	11,832	11,119	11,828
Dec.	9,893	11,746	11,857	12,595

Antimonial Lead Production by Primary Refineries

(A.B.M.S.)

(In tons of 2,000 lbs.)

End of.	1955	1956	1957	1958
Jan.	4,529	5,045	5,113	3,743
Feb.	4,777	5,888	5,468	3,657
Mar.	6,202	5,526	5,091	3,527
Apr.	5,343	5,818	6,183	3,655
May	4,737	5,405	6,978	4,827
June	4,792	4,456	4,466	3,992
July	1,153	3,853	5,372	2,775
Aug.	2,946	5,343	7,967	5,244
Sept.	6,650	6,709	7,574	4,761
Oct.	8,016	5,378	6,148	5,849
Nov.	7,985	6,993	3,791	3,913
Dec.	6,907	5,766	3,290	4,539
Total	64,037	66,180	67,541	50,482

Lead Imports and Exports By Principal Countries

(A. B. M. S.)

Reported in pigs, bars, etc.; metric tons except where otherwise noted.

IMPORTS

	1958		
	Aug.	Sept.	Oct.
U. S.† (s.t.)	23,945	40,822	...
Canada (s.t.)	101	...	...
Denmark	2,279	2,374	3,710
France	3,799	4,188	5,902
Italy‡	653	...	...
Netherlands	1,666	3,950	2,925
Norway	956	728	...
Sweden	1,147	852	...
Switzerland	1,399	971	1,615
U. K. (l.t.)	17,848	19,636	6,689
India* (l.t.)	1,341	1,452	...

EXPORTS

U. S.† (s.t.)	132	242	...
Canada (s.t.)	7,231	5,125	10,320
Denmark	1,096	1,187	1,731
France	863	1,474	828
Netherlands	162	549	298
Sweden	1,572	2,899	...
Switzerland	6	...	30
Northern Rhodesia* (l.t.)	1,066	930	...

† Refined.
‡ Includes lead alloys.
* British Bureau of Non-Ferrous Metal Statistics.

French Lead Imports

(A. B. M. S.)

(In metric tons)

	1957	1958	
	Jan.-Dec.	Jan.-Dec.	Dec.
Ore (gr. wt.)	100,833	107,689	7,754
Italy	963	....	....
Algeria	2,307	3,312	438
Morocco	93,540	98,278	6,369
Fr. Eq. Africa	4,000	6,099	947
Tunisia	22	....	....
Tunisia	1	....	....
Pig lead	49,960	49,679	3,677
Belgium	3,304	955	95
Germany (W.)	3,334	769	....
Netherlands	100	....	....
Spain	100	....	....
U. K.	762	....	....
Algeria	42	143	5
Morocco	19,295	23,504	1,813
Tunisia	22,996	23,194	1,764
Australia	....	942	....
Other countries	27	172	....
Antimonial lead	1,236	1,466	36

U. K. Lead Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

	1957	1958	
	Jan.-Dec.	Jan.-Dec.	Dec.
(Gross Weight)			
Lead and lead alloys	158,371	165,081	23,248
Australia	100,183	106,100	14,768
Canada	38,864	40,438	7,363
Belgium	4,226	4,242	575
Yugoslavia	2,494	1,513	...
United States	127	...	...
Peru	5,197	2,698	...
Other countries	7,280	10,090	542

U. S. Lead Consumption

(Bureau of Mines — In Short Tons)

Metal Products	Jan.-Nov.	Oct.	Nov.
Ammunition	36,937	4,057	2,919
Bearing metals	16,749	1,681	1,552
Brass and bronze	17,789	2,177	1,937
Cable Covering	68,350	6,482	5,878
Calking lead	61,452	7,843	4,731
Casting metals	7,150	860	615
Collapsible tubes	6,574	354	467
Foil	4,383	506	489
Pipes, traps and bends	19,919	2,100	1,660
Sheet lead	22,358	2,760	2,198
Solder	52,638	5,172	4,514
Storage battery grids, posts, etc.	139,429	14,201	14,210
Storage battery oxides	138,242	13,751	15,022
Terne metal	1,410	153	105
Type metal	24,014	2,370	2,008
Total	**617,394**	**64,467**	**58,305**
Pigments:			
White lead	11,825	1,592	1,340
Red lead and litharge	58,663	7,033	6,159
Pigment colors	10,890	1,089	1,032
Other*	3,899	437	349
Total	**85,277**	**10,151**	**8,880**
Chemicals:			
Tetraethyl lead	146,564	13,182	14,455
Misc. chemicals	2,449	271	206
Total	**149,013**	**13,453**	**14,661**
Miscellaneous uses:			
Annealing	3,961	453	366
Galvanizing	980	182	83
Lead plating	117	9	7
Weights and ballast	5,522	491	384
Total	**10,580**	**1,135**	**840**
Other uses:			
Unclassified	13,785	1,273	1,244
Total reported†	**876,049**	**90,479**	**83,930**
Estimated unreported consumption	22,000	2,000	2,000
Grand total†	**898,000**	**92,500**	**85,900**
Daily average‡	**2,689**	**2,984**	**2,863**

* Includes lead content of leaded zinc oxide production.
† Includes lead content of scrap used directly in fabricated products.
‡ Based on number of days in month without adjustment for Sundays and holidays.

U. K. Lead Consumption

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 pounds)

	1956	1957	1958
Jan.	31,012	29,657	29,607
Feb.	30,125	29,219	27,855
Mar.	30,099	29,144	29,713
Apr.	28,186	27,246	26,230
May	29,752	31,574	28,839
June	31,501	28,607	28,624
July	26,963	27,604	27,201
Aug.	25,077	24,756	21,726
Sept.	30,274	29,519	28,829
Oct.	32,057	32,486	31,356
Nov.	32,036	31,060	28,786
Dec.	25,963	26,530	27,154
Total	353,045	347,699	335,920

American Antimony

Monthly Average Prices
In bulk, f.o.b. Laredo
(Cents per lb. in ton lots)

	1956	1957	1958	1959
Jan.	33.00	33.00	33.00	29.00
Feb.	33.00	33.00	30.818	....
Mar.	33.00	33.00	29.00	....
Apr.	33.00	33.00	29.00	....
May	33.00	33.00	29.00	....
June	33.00	33.00	29.00	....
July	33.00	33.00	29.00	....
Aug.	33.00	33.00	29.00	....
Sept.	33.00	33.00	29.00	....
Oct.	33.00	33.00	29.00	....
Nov.	33.00	33.00	29.00	....
Dec.	33.00	33.00	29.00	....
Aver.	33.00	33.00	29.485	....

Consumers' Lead Stocks, Receipts and Consumption

(Bureau of Mines — In Short Tons)

	Stocks Oct. 31, 1958	Net Receipts in Nov.	Consumed in Nov.	Stocks Nov. 30, 1958
Soft lead	75,322	56,587	56,659	75,250
Antimonial lead	33,897	20,212	19,584	34,525
Lead in alloys	6,714	3,452	3,226	6,940
Lead in copper-base scrap	1,586	1,432	1,461	1,557
Total	117,519	81,683	*80,930	118,272

* Excludes 2,693 tons of lead which went directly from scrap to fabricated products and 307 tons of lead contained in leaded zinc oxide production.

Consumption of Lead by Class of Product

(Bureau of Mines — In Short Tons)

NOVEMBER

	Soft lead	Antimonial lead	Lead in alloys	Lead-in copper-base scrap	Total
Metal products	31,756	19,180	3,215	1,461	55,612
Pigments	8,556	17	....	....	8,573
Chemicals	14,661	....	....	....	14,661
Miscellaneous	538	302	....	....	840
Unclassified	1,148	85	11	....	1,244
Total	56,659	19,584	3,226	1,461	*80,930

* Excludes 2,693 tons of lead which went directly from scrap to fabricated products and 307 tons of lead contained in leaded zinc oxide production.

Domestic Zinc Statistics

American Zinc Institute

Commencing with January, 1948, all regularly operating U. S. primary and secondary smelters are included in this report. Production from foreign ores also is included.

(Tons of 2,000 lbs.)

	Stock Beginning	Production	Shipments: Domestic	Shipments: Export & Drawback	Shipments: Gov't Acc't	Shipments: Total	Stock at End	Daily Avg. Prod.
1950 Tl.	94,221	910,354	849,246	18,189	128,256	995,691	8,884	2,494
1950 Mo. Avg.		75,863	70,770	1,516	10,688	82,974		
1951 Total	8,884	931,833	836,800	42,067	39,949	918,816	21,901	2,553
1951 Mo. Avg.		77,653	69,733	3,506	3,329	76,568		
1952 Total	21,901	961,430	803,343	56,202	36,626	896,171	87,160	2,627
1952 Mo. Avg.		80,119	66,945	4,683	3,052	74,681		
1953 Total	87,160	971,191	818,850	16,326	42,332	877,508	180,843	2,661
1953 Mo. Avg.		80,933	68,238	1,361	3,528	73,126		
1954 Total	180,843	868,242	787,922	27,929	108,957	924,808	124,277	2,379
1954 Mo. Avg.		72,353	65,660	2,327	9,080	77,067		
1955 Total	40,979	1,031,018	1,007,619	19,497	87,200	1,114,316	40,979	2,825
1955 Mo. Avg.		85,918	83,968	1,625	7,267	92,860		
1956								
October	102,165	93,493	84,991	465	21,392	106,848	88,810	3,016
November	88,810	91,808	82,478	787	27,168	110,433	70,185	3,060
December	70,185	98,234	80,772	671	18,354	99,797	68,622	3,169
1956 Total		1,062,954	869,270	9,027	157,014	1,035,311	68,622	2,904
1956 Mo. Avg.		88,850	72,439	752	13,085	86,275		
1957								
January	68,622	93,452	67,273	450	15,377	83,100	78,974	3,014
February	78,974	88,078	67,731	1,527	10,905	80,163	86,889	3,146
March	86,889	96,924	67,441	1,558	25,608	94,607	89,357	3,127
April	89,357	96,506	55,000	1,411	23,921	80,332	105,531	3,217
May	105,531	96,855	60,729	2,106	26,858	89,693	112,693	3,124
June	112,693	90,719	54,275	1,358	14,324	69,957	133,455	3,024
July	133,455	85,779	57,862	4,497	11,186	73,055	146,179	2,767
August	146,179	84,166	70,318	860	9,871	81,049	149,296	2,715
September	149,296	77,455	62,111	530	10,344	72,985	153,766	2,582
October	153,766	81,492	66,225	372	12,736	79,333	155,925	2,629
November	155,925	79,754	73,437	581	9,148	83,166	152,531	2,658
December	152,531	86,270	62,730	210	9,188	72,128	166,655	2,783
1957 Total		1,067,450	765,132	15,460	179,466	815,567		
1958								
January	166,655	82,343	58,211	641	9,805	68,657	180,346	2,656
February	180,346	68,354	49,072	446	9,993	59,511	189,189	2,441
March	189,189	72,274	48,948	111	8,763	57,822	203,641	2,331
April	203,641	70,214	46,598	159	5,827	52,684	221,171	2,340
May	221,171	71,018	51,390	129	....	51,519	240,670	2,291
June	240,670	66,967	54,487	171	....	54,658	252,979	2,232
July	252,979	65,119	60,312	55	....	60,187	257,911	2,101
August	257,911	62,927	68,718	591	....	69,309	251,529	2,030
September	251,529	63,705	76,905	213	....	77,118	238,116	2,124
October	238,116	65,304	93,018	226	....	93,224	210,176	2,107
November	210,176	65,174	83,394	212	....	83,606	191,744	2,172
December	191,744	75,503	76,862	148	....	77,010	190,237	2,432
1958 Total		828,902	767,755	3,102	34,488	805,325	....	....
1959								
January	190,237	76,481	70,770	171	....	70,941	195,777	2,467

U. S. Consumption of Slab Zinc

Bureau of Mines

By Industries (Short Tons)

	Galvanizers	Die Casters	Brass products	Rolled zinc	Zinc oxide & other	Total
1950 Total	**434,094**	**281,385**	**136,451**	**67,779**	**27,656**	**947,365**
1951 Total	**386,373**	**266,442**	**141,456**	**64,000**	**28,738**	**887,009**
1952 Total	**375,563**	**236,022**	**155,311**	**51,508**	**30,885**	**849,289**
1953 Total	**403,162**	**205,246**	**177,801**	**53 784**	**38,087**	**977,636**
1954 Total	398,599	286,817	107,293	45,979	33,342	876,130
1955 Total	439,694	404,790	144,816	50,363	39,302	1,081,468
1956						
October	**40,875**	**34,985**	**10,164**	**4,158**	**3,695**	**93,877**
November	36,767	32,812	9,581	3,625	3,539	87,224
December	32,790	33,238	8,799	3,140	3,405	82,272
Total	421,218	352,451	122,395	45,382	36,251	988,097
1957						
January	**34,337**	**37,517**	**10,800**	**3,502**	**3,434**	**90,490**
February	31,686	32,520	9,156	3,284	3,206	80,752
March	30,747	30,946	8,860	3,553	3,378	78,384
April	30,631	29,166	9,491	4,001	3,300	77,489
May	30,537	28,423	9,563	3,389	3,097	75,909
June	29,907	27,688	8,710	3,613	2,646	73,464
July	26,067	26,116	6,361	2,698	2,981	65,123
August	27,885	29,237	9,755	3,686	3,099	74,562
September	28,651	31,051	9,588	2,911	1,500	75,976
October	32,940	35,499	10,952	3,385	1,783	87,898
November	28,025	31,396	10,024	2,843	1,255	76,595
December	24,383	27,927	7,854	2,679	1,427	67,421
Total	355,796	358,543	111,114	39,544	20,486	924,063
1958						
January	26,861	26,348	9,115	3,183	1,664	69,295
February	24,598	22,629	7,279	2,716	1,316	60,347
March	27,171	19,045	6,871	3,138	1,794	59,978
April	27,464	17,829	6,392	3,259	1,295	58,432
May	30,935	18,316	6,597	2,896	2,263	61,907
June	34,377	21,497	6,643	2,961	2,212	67,690
July	30,677	17,387	6,275	2,848	1,920	60,007
August	34,663	20,382	8,358	3,379	1,901	70,033
September	34,048	25,188	9,624	3,458	770	74,122
October	36,513	27,682	11,753	3,845	881	81,919
November	31,658	27,311	10,067	3,276	826	74,302

Prime Western Zinc Prices

(East St. Louis, f.o.b.)

(Cents per pound)

(In tons of 2,240 pounds)

	1956	1957	1958	1959
Jan.	13.46	13.50	10.00	11.50
Feb.	13.50	13.50	10.00	....
Mar.	13.50	13.50	10.00	....
Apr.	13.50	13.50	10.00	....
May	13.50	11.933	10.00	....
June	13.50	10.84	10.00	....
July	13.50	10.00	10.00	....
Aug.	13.50	10.00	10.00	....
Sept.	13.50	10.00	10.00	....
Oct.	13.50	10.00	10.865	....
Nov.	13.50	10.00	11.386	....
Dec.	13.50	10.00	11.50	....
Aver.	**13.497**	**11.40**	**10.313**	....

High Grade Zinc Prices

(Delivered)

N. Y. Monthly Averages

(Cents per pound)

	1956	1957	1958	1959
Jan.	14.81	14.85	11.35	12.50
Feb.	14.85	14.85	11.35	....
Mar.	14.85	14.85	11.35	....
Apr.	14.85	14.85	11.084	....
May	14.85	13.283	11.00	....
June	14.85	12.19	11.00	....
July	14.85	11.35	11.00	....
Aug.	14.85	11.35	11.00	....
Sept.	14.85	11.35	11.00	....
Oct.	14.85	11.35	11.865	....
Nov.	14.85	11.35	12.386	....
Dec.	14.85	11.35	12.50	....
Aver.	**14.847**	**12.75**	**11.407**	....

U. K. Zinc Consumption

(British Bureau of Non-Ferrous Metal Statistics)

(In Tons of 2,240 Pounds)

	1956	1957	1958
Jan.	29,779	28,485	27,473
Feb.	29,568	26,276	24,551
Mar.	28,650	27,049	26,967
Apr.	25,348	24,247	24,984
May	27,922	29,589	24,579
June	26,650	25,202	25,587
July	23,826	25,934	23,794
Aug.	18,867	20,381	19,076
Sept.	25,470	27,792	26,747
Oct.	27,784	29,552	29,838
Nov.	27,713	26,705	26,432
Dec.	24,134	24,419	26,042
Total	**315,711**	**315,631**	**306,070**

Mine Production of Zinc in United States

(U. S. Bureau of Mines)

(In short tons)

	Eastern States	Central States	Western States	Total U.S.*
1953				
Total	183,612	57,300	293,818	534,730
1954				
Total	166,487	63,100	234,942	464,539
1955				
Total	163,230	73,630	277,811	514,671
1956				
Total	175,310	61,080	301,253	537,643
1957				
May	17,066	1,744	28,314	47,123
June	16,981	2,855	25,664	45,940
July	15,391	2,679	24,602	42,672
Aug.	17,078	1,858	23,440	42,376
Sept.	14,111	187	20,481	34,779
Oct.	17,839	188	21,323	34,390
Nov.	14,874	180	19,213	34,967
Dec.	13,893	173	18,683	34,364
Total	196,877	29,506	290,151	520,128
1958				
Jan.	16,165	1,682	20,861	38,708
Feb.	13,652	1,365	18,528	33,545
Mar.	13,922	1,291	20,411	35,624
Apr.	15,719	1,311	22,375	39,405
May	15,580	1,314	18,940	35,834
June	14,931	1,490	16,650	32,971
July	13,427	——	15,985	29,442
Aug.	15,760	——	13,627	29,387
Sept.	14,857	——	15,279	29,865
Oct.	16,197	——	16,074	32,271
Nov.	15,393	——	16,998	32,391

*Includes Alaskan output in some months.

Mine Production of Lead in United States

(U. S. Bureau of Mines)

(In short tons)

	Eastern States	Central States	Western States	Total U.S.*
1953				
Ttl.	9,970	136,650	188,776	335,412
1954				
Ttl.	8,608	138,940	169,804	317,352
1955				
Ttl.	10,379	145,640	177,409	333,409
1956				
Ttl.	11,395	141,900	195,034	348,329
1957				
June	648	10,569	15,500	26,717
July	532	11,430	15,032	26,994
Aug.	674	11,168	15,654	27,496
Sept.	744	9,935	14,087	24,766
Oct.	759	12,392	14,950	28,101
Nov.	619	10,170	12,519	23,308
Dec.	599	9,887	12,393	22,880
Ttl.	9,300	135,800	188,392	333,493
1958				
Jan.	675	12,513	12,613	25,801
Feb.	542	11,356	11,734	23,632
Mar.	526	4,633	13,148	18,307
Apr.	487	12,438	12,739	25,664
May	626	11,660	11,939	24,225
June	615	10,662	11,499	22,776
July	454	10,019	10,662	21,135
Aug.	447	8,859	9,512	18,818
Sept.	389	7,734	11,221	19,344
Oct.	517	9,290	11,467	21,274
Nov.	606	10,500	11,823	22,929
Dec.	565	9,600	11,699	21,865
Ttl.	6,816	119,070	140,033	265,920

Mine Production of Gold in United States

(U. S. Bureau of Mines)

(In fine ounces)

	Eastern States	Western States	Alaska*	Total
1955				
Ttl.	2,026	1,634,625	247,535	1,884,186
1956				
Ttl.	1,998	1,607,930	204,300	1,814,228
1957				
May	165	137,953	5,839	143,957
June	204	129,196	11,457	140,857
July	203	128,073	33,723	161,999
Aug.	192	126,219	37,933	164,344
Sept.	178	124,454	42,434	167,066
Oct.	183	136,248	38,585	175,016
Nov.	182	125,796	27,000	152,978
Dec.	181	123,250	6,790	130,221
Ttl.	2,174	1,556,450	210,000	1,768,624
1958				
Jan.	207	134,282	2,736	137,226
Feb.	147	116,392	59	116,598
Mar.	174	123,808	96	124,078
Apr.	192	124,705	906	125,615
May	203	124,490	557	125,520
June	182	122,277	8,484	130,943
July	38	116,775	29,735	146,528
Aug.	174	113,281	34,947	148,202
Sept.	156	128,613	38,960	167,459
Oct.	186	135,882	42,467	178,535

* Alaska totals based on mint and smelter receipts.

Mine Production of Recoverable Silver in United States

(U. S. Bureau of Mines)

(In Fine Ounces)

	Eastern States	Missouri	Western States	Alaska*	Total
1955 Total	159,038	438,000	36,103,723	33,804	36,734,565
1956 Total	553,982	377,200	36,169,267	26,700	37,127,149
1957					
October	47,892	29,800	3,036,720	4,816	3,119,228
November	50,821	8,020	2,690,456	3,537	2,752,834
December	50,825	7,000	2,673,590	810	2,732,225
Total	610,386	240,000	37,018,950	26,000	37,895,336
1958					
January	45,358	17,400	2,939,634	324	3,002,716
February	38,608	16,000	2,788,072	5	2,842,685
March	38,134	5,500	2,834,641	10	2,878,285
April	38,308	17,800	2,807,664	57	2,863,829
May	41,840	22,870	2,746,539	60	2,811,309
June	3,637	21,300	2,775,606	138	2,800,681
July	7,723	21,840	2,503,013	680	2,533,256
August	8,819	19,970	2,836,937	1,369	2,417,095
September	5,783	17,180	2,621,537	1,693	2,646,193
October	5,653	20,600	2,749,976	5,331	2,781,560

* Alaska totals based on mint and smelter receipts.

U. S. Silver Production*

(A.B.M.S.)

(In thousands of ounces; commercial bars, 0.999 fine, and other refined forms)

	Dom.†	For.	Total
1954 Total	38,059	39,422	77,481
1955 Total	33,101	32,780	65,881
1956 Total	38,157	40,160	78,317
1957			
May	2,486	1,388	3,874
June	3,386	2,880	6,266
July	2,859	3,452	6,311
Aug.	2,500	2,558	5,058
Sept.	2,937	3,263	6,200
Oct.	3,334	3,419	6,753
Nov.	2,731	3,374	6,105
Dec.	3,029	2,872	5,901
Total	36,279	34,932	71,211
1958			
January	3,520	3,551	7,071
February	3,589	2,790	6,379
March	2,465	3,568	6,033
April	3,123	3,056	6,179
May	2,597	2,660	5,257
June	3,243	3,210	6,453
July	2,127	2,494	4,621
August	2,651	3,235	5,886
September	2,614	3,165	5,779
October	3,831	2,750	6,581
November	2,505	3,283	5,788
December	3,275	3,652	6,927
Total	35,540	37,414	72,954

* The separation between silver of foreign and domestic origin on the basis of refined bars and other refined forms is only approximate.

† Includes purchases of crude silver by the U. S. Mint.

Production of Primary Aluminum in the U. S.

(U. S. Bureau of Mines)

(In short tons)

	1952	1953	1954	1955	1956	1957	1958	1959
Jan.	76,934	89,895	116,247	128,203	140,394	147,029	139,910	156,708
Feb.	72,374	92,649	110,483	116,236	132,763	119,059	121,980	....
Mar.	77,069	104,460	122,339	130,272	145,895	135,706	134,019	....
Apr.	76,880	102,071	120,434	126,394	144,726	139,152	128,559	....
May	80,803	105,464	125,138	131,128	150,800	145,174	129,083	....
June	77,476	104,152	120,758	127,634	145,726	138,007	115,325	....
July	78,368	109,285	126,161	132,669	151,624	142,157	118,811	....
Aug.	85,175	110,545	125,296	133,551	92,406	143,449	125,416	....
Sept.	76,882	109,333	120,332	130,606	132,316	129,278	124,713	....
Oct.	77,312	108,219	125,089	134,655	149,125	133,759	139,847	....
Nov.	74,639	105,636	121,252	133,689	145,081	135,024	140,962	....
Dec.	83,419	110,291	127,056	140,748	148,391	140,033	153,301	....
Ttl.	937,330	1,252,013	1,460,565	1,565,721	1,679,427	1,647,710	1,565,556	....

Average Silver Prices

(Cents per fine ounce)

	1956	1957	1958	1959
Jan.	90.357	91.375	89.449	90.19
Feb.	90.90	91.375	88.625	....
Mar.	91.128	91.375	88.625	....
Apr.	90.875	91.375	88.625	....
May	90.75	91.307	88.625	....
June	90.46	90.456	88.625	....
July	90.14	90.31	88.625	....
Aug.	90.614	90.909	88.625	....
Sept.	90.75	90.602	88.673	....
Oct.	90.722	90.625	89.966	....
Nov.	91.375	90.382	90.125	....
Dec.	91.375	89.80	89.932	....
Aver.	90.79	90.824	89.043	....

Note — The averages are based on the price of refined bullion imported on or after August 31, 1943.

U. S. Copper Imports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1958		
	Sept.	Oct.	Nov.
Ore, matte & regulus (cont.)	4,477	5,051	12,382
Canada	211	125	620
Mexico	351	579	214
Cuba	2,150	829	2,149
Argentina	12	12	...
Bolivia	364	73	...
Chile	1,274	1,254	1,962
Peru	109	708	1,115
Cyprus	...	...	1,908
Philippines	1	...	2,814
U. of S. Africa	...	1,350	1,600
Australia	...	65	...
Other countries	5	56	...
Blister copper (content)	22,830	19,538	23,672
Mexico	3,984	1,613	4,904
Chile	14,041	15,427	16,544
Peru	1,796	...	...
Rhodesia & Nyasaland	647	827	555
U. of S. Africa	2,362	...	560
Australia	...	1,671	1,109
Refined cathodes and shapes	5,120	2,940	11,120
Canada	3,970	932	9,231
Mexico	...	...	462
Chile	...	250	200
Belgian Congo	1,150	1,716	700
Rhodesia & Nyasaland	...	42	...
Other countries	...	...	527
Total Imports:			
Crude & refined	32,427	27,529	47,174
Old and scrap (content)	186	349	291
Brass scrap and old (cu. cont.)	1,680	316	333

U. S. Zinc Imports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1958		
	Sept.	Oct.	Nov.
Zinc Ore (cont.)	31,222	23,998	32,955
Canada	12,042	10,928	10,276
Mexico	11,479	4,889	11,673
Cuba	26	...	...
Honduras	69	112	...
Bolivia	71	162	1,175
Colombia	..	14	...
Chile	361	7	...
Peru	6,262	6,954	9,752
U. of S. Africa	550	560	...
Australia	315	255	...
Philippines	3	7	1
Other countries	44	110	78
Zinc blocks, pigs, etc.	20,897	18,320	12,789
Canada	13,988	7,092	5,141
Mexico	2,151	888	1,126
Peru	50	200	343
Austria	...	...	55
Belgium	1,688	4,790	2,609
Germany (W.)	110	710	790
Italy	55	1,929	551
Netherlands	...	..	450
Norway	...	281	392
U. Kingdom	...	112	560
Yugoslavia	772	1,047	717
Belgian Congo	1,747	1,047	55
Rhodesia & Nyasaland	336	224	..
Total Imports:			
Zinc ore, blocks, pigs	52,119	42,318	45,744
Dross & Skim.	51	73	7
Old and worn out	22	...	10

U. S. Copper Exports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1958		
	Sept.	Oct.	Nov.
Ore, conc., matte & other unref. (content)	412	1,123	307
Refined ingots, bars, etc.*	32,238	43,141	44,498
Canada	163	253	397
Mexico	551	52	42
Argentina	427	110	455
Brazil	1,897	515	1,910
Belgium	784	119	224
Denmark	..	224	...
France	2,616	13,505	8,511
Germany (W.)	8,588	8,223	4,973
Italy	2,894	3,127	2,554
Netherlands	560	1,349	1,739
Norway	168	336	336
Portugal	1	...	...
Spain	66	...	...
Sweden	168	1,288	1,064
Switzerland	531	1,036	1,393
U. Kingdom	12,629	11,527	19,297
Formosa	...	...	563
India	26	112	449
Japan	55	1,070	546
Australia	112	...	...
Other countries	2	295	45
Total Exports:			
Crude & refined	32,650	44,264	44,805
Pipes and tubes	73	127	88
Plates and sheets	7	17	12
Rods, brush-copper, castings, rolls, segments (finished form) n.e.s.	514	433	394
Wire, bare	430	435	634
Building wire and cable†	220	318	280
Weatherproof wire†	13	14	101
Insulated copper wire n.e.s.†	1,191	1,203	628

* Includes exports of refined copper resulting from scrap that was reprocessed on toll for account of the shipper.
† Gross weight; n.e.s.—Not elsewhere specified.

U. S. Copper Scrap Exports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1958		
	Sept.	Oct.	Nov.
Copper scrap, unalloyed* (new and old)	1,579	2,062	2,521
Canada	19	17	19
France	44	34	...
Germany (W.)	1,165	1,321	1,200
Italy	...	255	799
Netherlands	82	248	154
Spain	55	11	61
U. Kingdom	...	...	28
India	214	149	...
Japan	...	...	58
Other countries	...	27	202
Copper-base scrap, alloyed† (new and old)	2,781	2,062	2,517
Canada	..	4	...
France	396	28	...
Germany (W.)	612	463	487
Italy	398	228	614
Netherlands	116	16	163
Spain	343	170	...
Switzerland	...	72	...
India	17	9	...
Japan	818	1,057	1,231
Hong Kong	69	11	...
Other countries	12	4	22

* Ash, brass mill, clippings, dross, flue dust, residues, scale, skimmings, wire scrap.
† Copper-base alloys, including brass and bronze—Ashes, clippings for remanufacture, cupro-nickel scrap, cupro-nickel trimmings, nickel silver scrap, phosphor bronze, phosphor copper, skimmings, turnings, round.

U. S. Lead Imports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1958		
	Sept.	Oct.	Nov.
Ore, matte, etc. (content)	12,944	16,682	14,839
Canada	1,165	2,030	3,101
Greenland	...	...	2,692
Mexico	146	31	...
Guatemala	216	...	...
Honduras	157	581	70
Bolivia	775	1,047	32
Chile	...	18	...
Colombia	...	234	...
Peru	4,795	3,175	8,545
U. of S. Africa	4,250	8,860	...
Australia	1,306	611	303
Philippines	122	78	47
Other countries	12	17	49
Base bullion (content)	5	..	43
Peru	...	...	43
Other countries	5	...	...
Pigs and bars	40,822	20,001	19,929
Canada	6,638	3,275	2,272
Mexico	22,247	6,181	4,971
Peru	3,674	1,542	2,900
Belgium	...	280	670
Denmark	9	22	19
Spain	1,323	3,064	2,291
Yugoslavia	5,283	926	2,779
Morocco	..	264	...
Australia	1,648	4,447	4,027
Total Imports:			
Ore ,base bullion, refined	53,771	36,683	34,811
Lead scrap, dross, etc. (cont.)	248	131	286
Antimonial lead & typemetal	310	291	531
Lead content thereof	302	284	522

U. S. Zinc Exports

(In tons of 2,000 lbs.)

(A.B.M.S.) (Bureau of the Census)

	1958		
	Sept.	Oct.	Nov.
Slabs, blocks, etc.	10	433	2
Cuba	...	28	...
Taiwan	...	405	...
Other countries	10	...	2
Total Exports:			
Ore, conc., slabs, blocks	10	433	2
Scrap, ashes, dross and skimmings	619	261	522
Battery shells and parts, unassembled	15	15	...
Rolled in sheets, plates & strips & die castings	320	482	412
Zinc and zinc alloys in crude and semifabricated forms	50	125	78
Zinc Oxide	271	275	208

Comparative Metal Prices

	Av. 1939	OPA Av. 1946	1959 Feb. 19
Copper, domestic Electro., Del. Vall.	11.20	14.375	30.00-30.50
Lead (N. Y.)	5.05	8.25	11.50
P. W. Zinc (E. St. Louis, f.o.b.)	5.05	5.05	11.50
New York, del.	...	...	12.00
Tin, Spot Straits, N. Y.	...	...	103.25
Aluminum ingot 99½%+	20.00	15.00	26.80
Antimony (R.M.M. brand, f.o.b. Laredo)	12.36	14.50	29.00

World Production of Copper

(American Bureau of Metal Statistics)

(In Tons of 2,000 Pounds)

	United States (a)	Canada (b)	Mexico (crude) (c)	Chile (d)	Peru (d)	Fed. Rep. of Germany (e)	Norway (f)	United Kingdom (g-h)	Yugoslavia (e)	India (f-h)	Japan (e)	Turkey (f)	Australia (e)	Northern Rhodesia (e)	Union of South Africa (d)
1954															
Total	868,721	302,984	59,630	372,614	29,223	258,259	14,305	152,858	83,894	8,274	117,371	27,727	42,241	336,577	43,153
1955															
Total	1,036,702	326,599	61,583	447,288	35,478	286,805	14,876	138,271	31,151	8,432	124,908	26,313	41,935	350,302	47,176
1956															
Total	1,133,134	356,251	69,918	506,251	35,005	279,461	16,457	127,365	32,390	8,827	139,062	27,101	55,711	435,186	47,914
1957															
Aug.	89,680	30,025	5,144	36,744	4,005	24,709	1,649	5,926	3,461	718	14,667	1,757	5,639	29,212	4,356
Sept.	87,270	30,220	4,960	32,822	4,270	24,654	1,725	12,237	3,996	757	14,448	3,398	5,072	42,871	3,864
Oct.	93,078	31,334	6,140	43,096	3,000	23,955	1,581	10,368	3,025	999	13,311	1,880	4,778	43,123	4,000
Nov.	90,045	35,823	5,778	42,995	3,227	23,127	1,464	9,606	3,080	775	13,166	1,862	4,527	44,013	5,134
Dec.	95,285	35,593	5,446	43,765	4,786	21,786	1,424	9,607	3,207	810	13,038	2,114	4,388	42,459	4,672
Total	1,115,483	360,745	42,905	....	46,141	255,710	17,265	121,799	37,186	9,298	143,654	27,101	55,633	499,418	47,828
1958															
Jan.	94,735	32,841	5,272	41,578	3,990	23,790	1,554	7,909	3,000	348	12,345	2,091	4,334	42,996	4,285
Feb.	87,130	30,639	4,849	39,648	3,235	21,792	1,340	11,495	3,054	756	10,806	1,509	4,045	36,364	4,708
Mar.	90,336	34,190	5,954	40,205	3,497	25,161	1,569	9,559	6,023	821	10,195	2,580	5,555	44,847	4,731
April	86,123	32,635	6,101	16,115	4,010	23,286	1,463	9,884	3,149	788	8,515	2,942	6,220	41,396	4,413
May	80,628	32,471	6,141	23,264	3,481	24,543	1,636	7,095	2,957	786	9,806	2,574	6,229	41,615	4,488
June	71,092	32,418	5,954	34,811	3,405	23,128	1,674	7,414	3,102	769	10,617	1,810	6,819	44,447	4,018
July	64,444	31,131	5,995	40,495	3,780	24,418	1,610	9,091	3,245	801	10,762	1,136	6,139	44,010	3,324
Aug.	67,917	50,867	6,340	45,211	3,646	26,409	1,855	3,451	2,838	786	11,053	....	6,220	42,000	4,974
Sept.	79,541	27,546	6,294	40,913	3,637	24,649	1,749	12,027	2,870	792	12,583	....	....	17,291	4,726
Oct.	92,214	22,560	5,380	47,230	2,950	27,200	1,618	11,225	....	809	13,310	....	....	....	4,749
Nov.	96,369	....	5,040	46,310	3,923	24,731	....	8,542	....	774	11,764	....	....	25,612	....
Dec.	97,618	....	5,066	....	3,196	....	....	....	....	....	....	....	....	....	....

(a) Reported by Copper Institute. Crude, "recoverable contents of mine production or smelter production or shipments, and custom intake." Does not include intake of scrap nor of imported ore except that received from Cuba and Philippines. (b) Blister copper plus recoverable copper in concentrates, matte, etc., exported. (c) Crude copper, i. e., copper content of blister or converter copper as originally produced in the several countries, although some of it may be refined at home; e. g., in Rhodesia. (d) Blister and/or refined. (e) Refined. There are quantities of scrap included in the electrolytic production in addition to that reported, tonnage of which is not obtainable. (f) Smelter production. (g) Refinery production from imported blister only. (h) British Bureau of Non-Ferrous Metal Statistics. * Refined.

World Production of Refined Lead

(American Bureau of Metal Statistics)

(In Tons of 2,000 Pounds)

	United States	Canada	Mexico	Peru	Belgium	France	Fed. Rep. of Germany	Italy	Spain	Yugoslavia	Japan	Australia (a)	French Morocco	Tunisia	Rhodesia	Total
1954																
Total	551,618	144,879	231,595	63,735	79,260	71,083	162,773	41,150	62,475	73,555	37,612	260,424	29,417	30,915	16,890	1,877,841
1955																
Total	547,153	148,811	221,138	67,303	91,241	73,251	162,508	46,806	67,509	83,347	40,912	254,558	28,870	28,620	17,976	1,893,125
1956																
Total	613,293	147,865	213,524	61,917	111,479	73,251	178,713	42,780	64,824	83,507	51,019	256,300	30,993	26,623	17,024	1,984,344
1957																
Aug.	48,191	12,568	26,341	7,258	7,961	7,443	15,403	2,869	6,124	7,691	4,786	23,548	2,477	1,903	1,456	177,247
Sept.	50,436	11,286	20,151	6,553	8,053	7,768	15,938	4,173	5,866	6,356	5,366	24,209	2,463	1,821	1,456	174,013
Oct.	52,041	10,302	18,627	6,323	9,615	7,874	17,643	3,491	6,582	7,409	5,297	19,639	2,733	2,512	1,456	171,334
Nov.	48,771	12,125	19,491	6,374	9,257	8,396	16,703	4,063	4,840	7,373	5,678	24,987	2,806	2,598	1,456	177,739
Dec.	50,500	12,504	19,465	6,951	8,191	7,512	17,215	4,231	5,460	7,846	5,785	24,095	4,173	3,123	1,568	180,412
Total	604,533	142,935	218,266	55,971	....	94,509	195,136	42,336	61,332	85,313	59,670	261,035	34,441	27,069	12,364	2,052,431
1958																
Jan.	47,665	12,672	20,144	6,188	8,375	7,501	18,017	4,013	5,297	6,042	4,974	25,518	3,323	1,785	1,232	173,922
Feb.	47,133	11,432	18,341	5,306	8,347	7,959	15,939	4,433	5,337	7,452	4,352	23,628	3,326	2,781	1,176	167,791
Mar.	43,441	12,837	18,455	6,899	8,773	7,890	16,548	4,597	6,392	8,600	4,335	26,359	3,375	1,174	1,204	171,654
April	40,984	11,785	21,099	5,626	8,917	8,858	15,144	4,652	6,281	7,021	3,481	19,876	2,338	2,394	1,204	160,946
May	47,487	12,212	21,005	5,421	9,058	8,339	16,327	2,402	6,944	7,482	3,541	25,035	3,532	2,978	1,204	174,255
June	44,636	12,706	17,846	6,255	8,264	7,977	15,194	3,677	6,403	6,469	3,461	22,979	2,906	3,127	1,232	164,278
July	38,827	7,175	18,315	6,880	8,548	8,319	11,229	4,581	6,327	6,872	3,567	21,563	2,767	568	1,232	147,624
Aug.	39,250	6,940	17,991	6,100	7,495	15	13,760	4,584	6,913	5,414	3,610	19,942	2,584	2,756	1,176	140,501
Sept.	43,269	10,908	16,256	5,192	7,849	8,202	15,700	4,367	5,692	6,942	3,587	22,632	2,184	2,369	1,120	158,285
Oct.	45,467	....	11,968	5,074	7,940	9,308	17,130	4,639	7,121	....	3,522	22,482	3,560	2,410	1,176	.....
Nov.	40,486	....	17,067	6,448	9,495	9,068	17,785	4,825	....	....	3,555	....	2,625	2,519	1,120	.....
Dec.	44,042	....	20,902	5,344	....	....	....	....	....	....	3,769	....	....	....	1,120	.....

(a) Production credited to Australia includes lead refined in England from Australian base bullion.

World Production of Slab Zinc

(American Bureau of Metal Statistics)

(In Tons of 2,000 Pounds)

	United States (a)	Can. (b)	Mexico	Peru (b-c)	Belgium	France (a)	Fed. Rep. of Germany	Great Britain	Italy	Netherlands	Norway (b)	Spain	Yugoslovia	Japan (a)	Australia (b)	Rhodesia (b)	Total (d)
1954																	
Total	868,242	218,810	60,477	16,982	234,896	122,248	184,806	90,987	74,856	28,686	48,768	25,109	15,046	112,292	117,066	29,736	2,243,591
1955																	
Total	1,031,018	257,008	61,879	18,943	233,623	123,623	197,024	90,917	77,761	31,203	49,724	26,244	15,175	122,965	113,221	31,248	2,534,457
1956																	
Total	1,062,954	255,601	62,136	10,428	251,906	124,105	204,961	90,784	80,407	32,123	53,170	25,224	15,434	153,821	117,445	32,396	2,630,383
1957																	
June	90,719	19,929	5,011	2,701	21,695	12,498	16,521	6,829	7,110	2,646	4,473	1,753	2,639	13,875	8,355	2,800	225,611
July	85,779	20,062	5,263	3,078	20,176	12,511	16,615	7,236	7,178	2,629	4,690	2,049	2,752	14,245	12,229	2,856	225,017
Aug.	84,166	20,305	5,144	3,233	19,391	12,387	16,617	7,272	7,029	2,641	4,378	2,143	2,740	14,008	10,675	2,856	220,368
Sept.	77,455	20,247	5,090	3,000	20,129	10,631	16,389	7,100	6,954	2,698	4,476	1,911	2,745	13,753	10,300	2,800	211,477
Oct.	81,490	20,890	5,351	2,892	21,688	12,305	16,800	7,292	6,133	2,781	4,419	2,011	2,011	14,215	10,829	2,856	221,830
Nov.	79,754	20,933	5,227	3,014	21,660	11,884	16,580	7,036	5,712	2,763	4,399	2,164	2,164	12,905	10,521	2,772	215,399
Dec.	86,270	21,829	5,441	3,333	22,274	12,413	17,684	7,483	6,596	2,742	4,483	2,789	2,189	13,638	10,895	2,828	230,624
Total	1,574,500	247,356	62,354	35,772	259,701	148,455	202,627	85,348	81,179	32,786	52,787	24,279	30,256	152,145	123,587	33,040	2,692,833
1958																	
Jan.	82,343	21,801	5,561	3,271	22,382	12,795	17,187	7,179	4,911	2,654	4,134	2,209	2,943	13,126	10,816	2,828	221,112
Feb.	68,354	19,743	4,985	2,669	22,026	12,028	15,562	6,599	5,275	2,659	4,030	1,975	2,797	12,072	9,642	2,576	199,114
Mar.	72,274	22,314	5,620	2,782	21,453	13,786	16,743	7,584	6,549	2,709	3,851	2,045	3,013	13,217	10,707	2,856	214,049
April	70,214	20,989	5,289	2,597	20,886	14,985	15,693	8,018	6,925	2,586	3,850	2,207	2,853	9,305	10,424	2,772	204,625
May	71,018	21,269	5,254	2,699	20,949	15,279	16,128	6,343	7,202	2,442	3,962	2,372	2,871	13,504	10,918	2,856	211,529
June	66,967	20,354	5,016	2,429	20,094	14,243	15,663	7,202	7,731	2,221	3,307	2,309	2,854	14,040	10,988	2,744	204,067
July	65,119	20,878	5,285	2,520	19,556	14,295	16,210	7,140	5,879	2,471	3,815	2,296	2,928	15,835	10,742	2,884	203,828
Aug.	62,297	21,152	5,216	2,822	18,308	14,253	16,204	6,689	5,991	2,533	3,793	2,259	2,820	12,420	11,075	2,912	.....
Sept.	63,705	20,531	5,025	2,640	17,961	12,232	15,635	6,887	5,991	2,533	3,793	2,259	2,820	12,420	11,075	2,912	199,142
Oct.	65,304	21,125	5,344	2,305	17,866	14,176	16,462	6,046	6,442	2,280	4,915	....	....	14,436	11,045	2,940	.....
Nov.	65,174	20,274	5,197	2,625	18,696	13,274	16,196	6,158	5,874	2,249	4,669	....	....	13,501	....	2,828	.....
Dec.	75,503	21,705	5,537	2,686	....	....	....	7,564	....	....	4,755	....	....	12,473	....	2,856	.....

(a) Partially electrolytic. (b) Entirely electrolytic. (c) Beginning 1954 both electrolytic and electrochemic. (d) The above totals omit production in Russia, Czechoslovakia, Poland and in Argentina.

U. K. Virgin Copper Stocks

(In long tons)

(British Bureau of Non-Ferrous Metal Statistics)

At start of:	1957	1958	1959
Jan.	59,614	91,477	64,184
Feb.	59,203	82,483	....
Mar.	62,120	89,147	....
Apr.	61,779	94,330	....
May	71,101	88,582	....
June	61,991	88,913	....
July	64,121	81,851	....
Aug.	81,146	84,756	....
Sept.	98,595	89,899	....
Oct.	100,815	85,092	....
Nov.	90,877	74,686	....
Dec.	81,657	69,023	....

U. K. Refined Lead Stocks

(British Bureau of Non-Ferrous Metal Statistics)

(In long tons)

At start of:	1957	1958	1959
Jan.	39,420	51,295	45,577
Feb.	41,433	49,134	....
Mar.	36,900	47,738	....
Apr.	34,877	40,547	....
May	44,933	37,509	....
June	40,804	34,608	....
July	42,148	40,518	....
Aug.	48,275	37,148	....
Sept.	51,435	43,758	....
Oct.	45,301	48,856	....
Nov.	50,371	40,216	....
Dec.	48,065	35,335	....

U. K. Stocks of Zinc

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

At start of:	Virgin Zinc 1958	Virgin Zinc 1959	Zinc Conc. 1958	Zinc Conc. 1959
Jan.	44,926	....	79,349	....
Feb.	43,308	....	82,125	....
Mar.	46,662	....	87,721	....
Apr.	46,608	....	84,631	....
May	47,251	....	80,964	....
June	50,539	....	74,470	....
July	49,613	....	71,553	....
Aug.	48,497	....	70,105	....
Sept.	45,590	....	63,909	....
Oct.	45,784	....	57,376	....
Nov.	39,341	....	53,371	....
Dec.	35,396	....	58,022	....

U. K. Copper Exports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

	1957 Jan.-Dec.	1958 Jan.-Dec.	1958 Dec.
(Gross Weight)			
Copper unwrought—ingots, blocks, slabs, bars etc.	35,300	55,540	3,786
Plates, sheets, rods, etc.	31,100	29,974	4,759
Wire (including uninsulated electric wire)	55,021	79,459	3,261
Tubes	13,814	16,048	1,249
Other copper, worked (including pipe fittings)	1,216	1,220	97
Total	136,451	182,241	13,152

Copper Consumption in United Kingdom

British Bureau of Non-Ferrous Metal Statistics

(In tons of 2,240 pounds)

	Unalloyed	Alloyed*	Total	Virgin	Scrap
1956 Total	388,167	251,312	639,479	500,794	138,685
1957					
August	24,606	14,834	39,440	30,583	8,857
September	35,404	19,666	55,070	43,883	11,187
October	38,044	22,004	60,048	49,638	10,410
November	35,102	20,506	55,608	44,144	11,464
December	30,043	18,591	48,634	38,104	10,530
Total	407,326	234,158	641,484	507,493	133,991
1958					
January	35,799	20,816	56,615	46,437	10,178
February	32,207	19,352	51,559	37,907	13,652
March	33,491	19,580	53,071	41,539	11,532
April	36,722	19,100	55,822	43,784	12,038
May	35,810	18,423	54,233	43,571	10,662
June	39,277	18,141	57,418	46,080	11,338
July	36,743	17,091	53,564	42,373	11,191
August	28,416	13,756	42,181	33,073	9,108
September	42,813	18,596	61,408	52,018	9,390
October	43,402	21,788	65,190	53,937	11,253
November	40,987	19,232	60,219	47,932	12,287
December	37,580	19,118	56,698	45,968	10,730
Total	442,977	225,001	667,978	534,619	133,359

* Includes copper sulphate effective October, 1954.

U. K. Zinc Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

	1957 Jan.-Dec.	1958 Jan.-Dec.	1958 Dec.
(Gross Weight)			
Zinc ore and conc.	207,244	121,356	7,099
Zinc conc.	112,998	†	†
Australia	83,325	...	...
Canada	12,725	...	...
Chile	3,248	..	...
Burma	4,725	...	...
Italy	2,314	...	...
Rhodesia-Nyasaland	1,250	...	...
Turkey	2,156	...	...
Spain	2,618	...	..
Other countries	637	...	...
(Gross Weight)			
Zinc and zinc alloys	148,349	135,387	13,752
Rhodesia-Nyasaland	2,250	2,325	150
Australia	4,351	6,328	950
Canada	72,914	73,411	8,462
Belgium	18,832	10,697	1,334
Germany (West)	1,973	26	3
Netherlands	2,073	932	601
Norway	450	...	...
Soviet Union	16,824	15,706	960
United States	7,177	861	...
Belgian Congo	7,575	7,671	500
Other countries	13,930	17,430	792

† Not available.

Zinc Imports and Exports By Principal Countries

(A. B. M. S.)

Reported in ingots, slabs, etc.; metric tons except where otherwise noted.

	1958 Aug.	1958 Sept.	1958 Oct.
IMPORTS			
U. S. (s.t.)	16,871	20,897	...
Canada (s.t.)	63	...	...
Denmark	1,346	627	1,979
France	934	1,533	2,181
Italy	275	...	...
Netherlands	1,005	1,329	1,080
Sweden	2,778	1,530	...
Switzerland†	1,558	466	1,133
U. K. (l.t.)	9,572	8,796	10,322
India* (l.t.)	4,187	2,720	4,536
EXPORTS			
U. S. (s.t.)	16	10	...
Canada (s.t.)	15,906	8,670	22,810
Denmark	449	276	369
France	52	...	5
Italy	504	...	...
Netherlands	392	479	674
Norway	1,765	3,573	...
Switzerland†	361	852	244
U. K.‡ (l.t.)	574	744	669
Northern Rhodesia* (l.t.)	2,376	2,006	...

† Includes scrap.

‡ Includes manufactures.

* British Bureau of Non-Ferrous Metal Statistics.

United Kingdom Tin Statistics

(British Bureau of Non-Ferrous Metal Statistics)

	Tin Content of Tin in Ore: Imports	Production*	Stock at end of period*	Tin Metal: Imports	Production*	Consumption	Exports & Re-exports	Stock at end of period
1956 Total	26,571	1,044	2,393	2,226	26,434	22,232	8,371	3,176
1957 Total	39,272	1,028	....	9,834	34,175	20,365	7,362	71,931
1958								
January	2,500	101	3,602	2,335	3,614	1,734	402	18,058
February	3,243	86	3,446	2,495	2,746	1,567	310	20,322
March	2,350	89	3,261	1,018	3,106	1,566	1,408	20,940
April	2,678	82	4,407	582	1,790	1,725	924	20,069
May	2,707	101	3,872	1,428	3,400	1,583	....	21,529
June	1,315	104	2,431	1,029	2,964	1,719	912	21,715
July	2,007	107	2,020	329	2,904	1,656	478	20,880
August	2,235	44	2,063	1,525	2,423	1,412	912	19,676
September	1,743	99	1,564	1,141	2,579	1,784	988	19,942
October	1,913	91	1,419	145	2,488	2,072	882	20,135
November	1,971	....	1,770	851	2,187	1,795	594	19,285

*As reported by International Tin Study Group. Production of Tin Metal includes production from imported scrap and residues refined on toll. Stocks exclude strategic stock but include official warehouse stocks.

Canada's Copper Output

(Dominion Bureau of Statistics)

(Refined Copper)
(In Tons)

	1955	1956	1957	1958
Jan.	22,600	26,653	25,469	32,868
Feb.	21,455	26,229	21,861	28,668
Mar.	25,083	26,750	27,663	29,239
Apr.	24,077	26,617	27,398	30,635
May	23,840	27,626	29,086	32,471
June	21,890	27,122	24,093	32,418
July	21,185	27,250	27,195	31,131
Aug.	26,184	29,219	26,943	30,867
Sept.	24,752	27,950	24,633	27,546
Oct.	25,546	29,696	30,312	22,572
Nov.	25,213	27,346	27,331	20,368
Dec.	27,172	28,716	31,604	....
Year	288,987	331,174	323,588	....

Canada's Lead Exports

(Dominion Bureau of Statistics)

(In Pigs)
(In Tons)

	1955	1956	1957	1958
Jan.	5,500	4,888	8,946	4,752
Feb.	11,882	3,856	6,633	1,553
Mar.	10,318	4,007	7,044	9,497
Apr.	11,967	7,636	7,314	7,450
May	6,416	7,214	9,676	7,764
June	9,897	6,632	7,210	4,036
July	8,341	9,696	4,682	12,629
Aug.	4,884	4,713	6,416	7,232
Sept.	5,538	9,908	8,467	5,125
Oct.	8,053	9,072	7,761	10,320
Nov.	4,622	9,227	6,175	10,641
Dec.	5,286	2,734	4,217	....
Year	92,407	79,633	84,541	....

Canada's Silver Exports

(Dominion Bureau of Statistics)

(In ores and concentrates)
(Fine Ounces)

	1956	1957	1958
Jan.	435,047	253,940	634,715
Feb.	196,803	380,463	208,149
Mar.	328,857	521,849	350,827
Apr.	348,838	431,646	284,971
May	447,710	523,228	376,082
June	495,742	468,559	438,253
July	686,209	844,545	529,770
Aug.	1,080,301	811,530	279,511
Sept.	481,042	861,857	583,570
Oct.	731,099	432,000	323,475
Nov.	669,285	263,273	211,892
Dec.	1,023,481	186,569	.....
Year	6,924,414	5,979,459	.....

Canada's Copper Exports

(Dominion Bureau of Statistics)

(Ingots, bars, slabs and billets)
(In Tons)

	1955	1956	1957	1958
Jan.	11,078	15,981	20,582	26,883
Feb.	12,897	11,041	16,272	16,816
Mar.	12,423	12,276	14,720	18,662
Apr.	10,321	14,476	16,417	23,261
May	10,911	12,851	19,048	19,358
June	13,387	10,985	10,826	20,831
July	12,674	13,599	18,621	21,703
Aug.	13,219	14,710	21,980	15,881
Sept.	13,479	17,268	14,314	15,373
Oct.	14,208	13,896	13,110	20,341
Nov.	14,545	19,130	16,622	14,391
Dec.	14,057	18,630	16,282	....
Year	153,199	174,843	198,794	....

Canada's Zinc Output

(Dominion Bureau of Statistics)

(Refined Zinc)
(In Tons)

	1955	1956	1957	1958
Jan.	22,028	21,696	20,340	21,801
Feb.	19,865	20,356	19,808	19,743
Mar.	22,215	22,010	21,941	22,314
Apr.	21,301	21,339	20,504	20,989
May	21,599	21,790	20,564	21,269
June	20,565	20,780	19,928	20,353
July	21,769	21,691	20,061	20,873
Aug.	22,029	21,354	20,305	21,152
Sept.	20,898	20,691	20,247	20,530
Oct.	22,206	21,412	20,892	21,125
Nov.	21,398	20,470	20,933	20,273
Dec.	21,135	22,012	21,828	....
Year	257,008	255,601	247,351	....

Canada's Silver Output

(Dominion Bureau of Statistics)

(In Ounces)

	1956	1957	1958
Jan.	2,280,575	2,158,631	2,529,583
Feb.	2,094,467	2,051,679	2,294,655
Mar.	2,296,648	2,346,316	2,448,698
Apr.	1,759,384	2,225,638	2,558,958
May	2,463,374	2,111,185	2,650,665
June	2,494,748	2,208,584	2,527,632
July	2,267,271	2,383,390	2,385,687
Aug.	2,315,312	2,592,468	2,884,154
Sept.	2,517,451	2,382,121	2,856,304
Oct.	2,379,162	2,817,358	2,390,012
Nov.	2,494,547	2,566,519	2,643,790
Dec.	2,357,202	2,537,984	.....
Year	27,655,141	28,361,873	.....

Canada's Lead Output

(Dominion Bureau of Statistics)

(Recoverable Lead)*
(In Tons)

	1955	1956	1957	1958
Jan.	18,959	16,002	14,032	17,117
Feb.	15,018	14,344	15,170	14,908
Mar.	19,113	16,857	16,940	15,421
Apr.	17,889	11,573	14,275	15,644
May	16,808	15,446	14,591	15,131
June	17,800	18,145	16,431	15,645
July	16,650	15,841	14,377	14,076
Aug.	16,676	16,104	14,679	12,260
Sept.	15,972	15,760	15,869	15,401
Oct.	13,658	16,725	14,151	14,564
Nov.	15,182	14,865	15,879	16,680
Dec.	17,857	16,056	15,296	....
Year	201,583	188,971	181,690	....

* New base bullion from Canadian ores plus recoverable lead in ores or concentrates shipped for export.

Canada's Zinc Exports

(Dominion Bureau of Statistics)

(Slabs in Tons)

	1955	1956	1957	1958
Jan.	22,181	15,550	19,304	17,349
Feb.	25,556	11,757	16,618	8,376
Mar.	20,178	8,822	14,923	19,636
Apr.	21,018	14,317	17,131	16,346
May	14,820	11,357	16,680	15,122
June	19,581	15,296	16,157	7,776
July	13,522	15,499	12,912	27,394
Aug.	16,581	13,070	20,520	15,906
Sept.	11,793	19,732	17,671	8,670
Oct.	19,836	20,792	16,735	22,810
Nov.	14,164	21,411	17,225	17,978
Dec.	14,607	16,125	16,131	....
Year	213,837	183,728	202,007	....

Canada's Nickel Output

(Dominion Bureau of Statistics)

(In Tons)

	1955	1956	1957	1958
Jan.	14,387	14,985	16,609	16,710
Feb.	13,375	14,997	15,027	15,896
Mar.	15,544	15,504	16,733	15,853
Apr.	15,011	14,431	15,347	15,163
May	15,352	15,203	16,225	15,231
June	14,835	14,492	15,447	14,603
July	14,530	15,125	15,878	12,851
Aug.	14,825	14,852	16,756	13,097
Sept.	13,734	14,530	15,604	11,786
Oct.	14,411	15,762	15,628	3,682
Nov.	14,290	15,062	14,587	3,178
Dec.	14,881	14,824	15,096	....
Year	175,173	178,767	188,962	....

Canadian Copper Exports

(Dominion Bureau of Statistics)

(In tons of 2,000 lbs.)

	1958		
	Sept.	Oct.	Nov.
Ore, matte, regulus, etc. (content)	2,210	3,821	1,051
United States —	980	97	437
Belgium	136	...	...
Germany (W.)	72	33	...
Norway	962	1,348	614
U. Kingdom	60	135	...
Japan	...	2,208	...
Ingots, bars, billets, anodes	15,373	20,340	14,391
United States	3,834	4,977	4,287
Brazil	55	133	...
Belgium	336	...	280
Czechoslovakia	112	...	...
Denmark	56	...	...
France	1,120	2,144	840
Germany (W.)	1,092	1,091	392
Italy	504	543	140
Netherlands	308	28	252
Sweden	449	56	...
Switzerland	56	84	308
U. Kingdom	6,988	9,982	5,934
India	330	1,214	1,901
Japan	110	...	...
Other countries	23	88	57
Total Exports:			
Crude & refined	17,583	24,161	15,442
Old and scrap	836	466	997
Rods, strips, sheet & tubing	1,003	1,647	1,328

Canadian Zinc Exports

(Dominion Bureau of Statistics)

(In tons of 2,000 lbs.)

	1958		
	Sept.	Oct.	Nov.
Ore (zinc content)	24,269	10,738	11,982
United States	12,455	10,738	11,982
Belgium	7,482	...	...
France	1,793	...	...
Germany (W.)	1,693	...	...
Netherlands	846	...	...
Slab zinc	8,670	22,810	17,978
United States	4,134	14,425	5,114
Brazil	...	554	540
Chile	...	22	66
Denmark	56	...	...
Germany (W.)	224	812	140
Netherlands	...	224	112
United Kingdom	4,256	6,548	10,507
Korea	...	142	...
Taiwan	...	33	134
India	...	...	560
Pakistan	...	29	784
Other countries	...	21	21
Total Exports:			
Ore and slabs	32,939	33,548	29,960
Zinc scrap, dross, ashes	715	509	773
United States	51	73	8
Belgium	89	295	530
Netherlands	...	...	228
Japan	35	141	7

Canada's Nickel Exports

(Dominion Bureau of Statistics)
(Refined, in oxides, matte, etc.)
(In Tons)

	1956	1957	1958
January	15,121	14,260	14,233
February	13,940	9,974	12,157
March	16,219	14,958	12,316
April	14,448	18,671	20,962
May	14,729	18,351	20,574
June	16,403	14,539	16,144
July	11,079	14,181	14,055
August	18,470	14,966	13,012
September	13,849	14,160	14,371
October	12,800	13,370	8,312
November	14,084	16,620	3,000
December	15,694	14,606	....
Year	176,836	178,656	

Canadian Lead Exports

(Dominion Bureau of Statistics)

(In tons of 2,000 lbs.)

	1958		
	Sept.	Oct.	Nov.
Ore (lead content)	6,476	4,092	1,509
United States	1,475	3,266	1,509
Belgium	3,265	...	...
Germany (W.)	1,736	826	...
Refined lead	5,125	10,320	10,641
United States	3,388	6,429	1,101
Brazil	...	82	...
U. Kingdom	1,736	3,724	9,140
Japan	...	33	...
Taiwan	...	51	146
Other countries	1	1	254
Total Exports:			
Ore and refined	11,601	14,412	12,150
Pipe and tubing	...	...	1
Lead scrap	49	40	43

Copper Imports and Exports By Principal Countries

(A. B. M. S.)

Reported in ingots, slabs, etc.; metric tons except where otherwise noted.

	1958		
	Sept.	Oct.	Nov.
IMPORTS			
U. S. (blist., s.t.)	22,830	19,538	...
(ore, etc., s.t.)	4,477	5,051	...
(ref., s.t.)	5,120	2,940	...
Denmark	517	607	629
France (crude)	...	813	...
(refined)	18,068	16,168	18,556
Italy	8,395	...	...
Netherlands	3,552	2,901	2,246
Norway	249	152	...
Sweden	4,430	4,481	...
Switzerland	2,577	2,090	2,174
U. K. (l.t.)	43,376	41,289	32,958
India (blister/-ref., l.t.)*	4,743	3,642	2,439
EXPORTS			
U. S. (ore and unref., s.t.)	412	1,123	...
(refined, s.t.)	32,238	43,141	...
Canada (refined, s.t.)	15,373	20,340	14,391
Finland‡	517	276	...
Norway	1,482	1,258	...
Sweden	1,067	856	...
U. K. (l.t.)	4,980	6,468	6,600
No. Rhodesia (ref. & blist., l.t.)*	28,514	17,909	2,140

‡ Includes old.
* British Bureau of Non-Ferrous Metal Statistics.

French Copper Imports

(A. B. M. S.)

(In metric tons)

	1957 Jan.-Dec.	1958 Jan.-Dec.	1958 Dec.
Crude copper for refining (blister, black and cement)	5,378	4,877	813
U. Kingdom	1	...	...
Belgian Congo	4,877	4,877	813
Turkey	500	...	...
Refined	181,252	215,457	14,207
United States	49,437	75,155	6,884
Canada	11,595	17,963	610
Chile	3,257	47	...
Belgium	48,584	58,190	4,144
Germany (W.)	5,238	4,353	166
Norway	3,418	2,540	203
Sweden	2,453	2,590	...
U. Kingdom	5,015	1,152	10
Belgian Congo	30,973	31,228	2,031
U. of S. Africa	5	5	...
Rhodesia-Nyasaland	21,175	22,183	159
Other countries	102	51	...

French Zinc Imports

(A. B. M. S.)
(In metric tons)

	1957 Jan.-Dec.	1958 Jan.-Dec.	1958 Dec.
Ore (gross weight)	312,982	351,651	25,760
Canada	7,768	16,025	...
Bolivia	...	9,090	...
Peru	19,133	11,962	...
Belgium	495	551	...
Finland	8,070	7,420	...
Greece	10,498	22,789	3,870
Italy	25,854	48,513	...
Netherlands	...	258	...
Norway	2,465	4,215	353
Portugal	476	...	...
Spain	30,348	38,185	1,902
Sweden	3,798	...	...
Yugoslavia	8,530	25,402	7,420
Algeria	62,352	53,942	1,430
Morocco	99,599	87,514	6,901
Tunisia	7,544	6,901	...
Belg. Congo	9,747	14,271	3,884
Australia	16,305	4,613	...
Slabs, bars, blocks, etc.	10,436	14,830	1,425
Mexico	...	150	...
Belgium	8,206	10,817	1,208
Germany (W.)	559	929	100
Italy	664	1,088	117
Norway	745	489	...
Russia	179	1,017	...
U. Kingdom	50	207	...
Algeria	33	133	...

French Metal Exports

(A. B. M. S.)
(In metric tons)

	1957 Jan.-Dec.	1958 Jan.-Dec.	1958 Dec.
LEAD			
Ore (g. wt.)	1,913	2,015	33
Pig lead	11,025	15,415	2,268
United States	780	250	....
Uruguay	1	520	297
Denmark	3,149	1,270	406
Germany (W)	1,961	4,412	775
Sweden	508	....	....
Switzerland	3,910	6,248	760
United King.	508	2,438	....
Other countries	208	277	30
Antimonial lead	372	1,429	275
ZINC			
Slabs, bars, blocks, etc.	283	449	1
COPPER			
Crude copper for refining (blister, black & cement)	....	78	....

U. K. Copper Imports

(British Bureau of Non-Ferrous Metal Statistics)
(In tons of 2,240 lbs.)

	1957 Jan.-Dec.	1958 Jan.-Dec.	1958 Dec.
(Gross Weight)			
Copper and copper alloys	468,560	463,672	38,200
U. of S. Africa	883	753	501
Rhodesia-Nyasaland	216,711	188,378	2,939
Canada	78,618	82,458	7,982
Belgium	610	1,222	355
Germany (West)	221	261	42
Norway	1,099	1,662	275
Sweden	473	6	...
United States	83,647	100,804	17,022
Chile	79,591	80,469	7,800
Peru	2,385	2,566	...
Turkey	892	...	...
Belgian Congo	2,999	3,501	750
Other countries	431	1,592	534

Nonferrous Castings

MONTHLY SHIPMENTS, BY TYPE OF METAL

(Bureau of Census — Thousands of Pounds)

	Aluminum	Copper	Magnesium	Zinc	Lead Die
1953 Total	658,022	990,496	34,517	521,253	20,444
1954 Total	607,764	834,557	25,572	474,741	18,396
1955 Total	833,058	1,011,748	27,892	781,254	21,045
1956 Total	801,136	966,473	36,168	88,069	20,734
1957					
June	58,547	70,959	2,973	49,356	2,336
July	52,173	60,621	2,544	48,379	2,079
Aug.	55,735	71,233	2,315	49,829	2,165
Sept.	58,692	70,804	2,279	47,736	2,115
Oct.	64,140	81,836	2,192	62,332	2,481
Nov.	58,898	70,187	1,920	58,689	1,590
Dec.	53,102	65,708	1,533	49,597	1,399
Total	751,856	875,389	30,322	663,330	23,791
1958					
January	57,845	69,707	1,881	50,658	1,566
February	50,695	58,356	1,803	42,687	1,294
March	50,547	60,157	1,975	39,719	1,630
April	44,948	59,311	2,215	35,796	1,467
May	44,093	57,506	2,422	36,447	1,655
June	40,701	57,124	2,205	38,132	1,971
July	38,818	51,124	2,200	32,765	1,394
August	45,034	57,790	1,869	35,860	1,804
September	52,796	64,447	2,804	47,127	1,725
October	55,699	74,012	2,627	45,045	1,708
November	55,793	62,476	2,615	48,431	1,409

Copper Castings Shipments

BY TYPE OF CASTING

(Bureau of Census) (Thousands of Pounds)

	Total	Sand	Permanent Mold	Die	All Other
1961 Total	1,197,443	1,075,437	69,883	12,516	39,607
1952 Total	1,009,910	910,362	68,865	8,259	26,924
1953 Total	990,496	888,369	61,316	10,077	30,734
1954 Total	834,557	751,804	48,849	6,480	27,394
1955 Total	1,011,748	907,852	63,041	8,541	31,408
1956 Total	966,113	866,404	57,522	10,023	32,134
1957					
June	70,959	63,910	3,590	868	2,591
July	60,621	54,847	3,010	825	1,939
Aug.	71,233	64,953	3,278	799	2,203
Sept.	70,804	64,470	3,243	870	2,221
Oct.	81,836	74,391	3,693	1,057	2,695
Nov.	70,187	63,944	3,006	862	2,375
Dec.	65,708	59,606	3,046	888	2,168
Total	875,389	789,819	44,746	10,776	30,048
1958					
January	69,707	63,294	3,327	894	2,192
February	58,356	52,579	3,202	796	1,779
March	60,157	54,007	3,395	823	1,932
April	59,311	53,271	3,385	949	1,705
May	57,506	51,634	3,077	891	1,904
June	57,124	51,967	3,001	839	1,317
July	51,124	46,636	2,351	792	1,345
August	57,590	52,981	2,425	682	1,702
September	64,447	58,435	2,888	876	2,248
October	74,012	67,564	3,239	790	2,419
November	62,746	57,386	2,604	810	1,946

Nickel Averages

Electro, cathode sheets, 99.00%, f.o.b. refinery, duty included

(Cents per pound)

	1956	1957	1958	1959
Jan.	64.50	74.00	74.00	74.00
Feb.	64.50	74.00	74.00	....
Mar.	64.50	74.00	74.00	....
Apr.	64.50	74.00	74.00	....
May	64.50	74.00	74.00	....
June	64.50	74.00	74.00	....
July	64.50	74.00	74.00	....
Aug.	64.50	74.00	74.00	....
Sept.	64.50	74.00	74.00	....
Oct.	64.50	74.00	74.00	....
Nov.	64.50	74.00	74.00	....
Dec.	72.48	74.00	74.00	....
Aver.	65.165	74.00	74.00	....

Platinum Averages

N. Y. MONTHLY QUOTATIONS

(Dollars per Troy Ounce)

	1956	1957	1958	1959
Jan.	106.30	101.92	77.85	52.57
Feb.	104.34	98.59	74.82	....
Mar.	104.23	93.50	72.096	....
Apr.	103.92	93.45	70.72	....
May	105.23	92.865	67.34	....
June	106.50	92.02	66.18	....
July	106.50	90.265	64.35	....
Aug.	105.76	84.426	60.94	....
Sept.	105.50	84.00	59.60	....
Oct.	104.85	84.00	57.327	....
Nov.	104.50	83.80	56.41	....
Dec.	104.50	78.70	53.154	....
Aver.	105.18	89.79	65.07	....

Spot Straits Tin

(Straits, Open Market, N. Y.)

Monthly Average Prices

	1956	1957	1958	1959
Jan.	105.036	101.511	92.94	99.411
Feb.	100.803	101.132	93.915	....
Mar.	100.786	99.643	94.452	....
Apr.	99.268	99.304	92.988	....
May	96.994	98.347	94.512	....
June	94.589	98.05	94.708	....
July	96.143	96.52	94.892	....
Aug.	99.049	94.261	94.988	....
Sept.	103.809	93.406	94.101	....
Oct.	106.023	91.838	96.523	....
Nov.	110.921	89.236	99.118	....
Dec.	104.268	92.35	98.989	....
Aver.	101.475	96.301	95.177	....

Prompt Tin Prices

(Straits, Open Market, N. Y.)

Monthly Average Prices

(Cents per Pound)

	1956	1957	1958	1959
Jan.	104.768	101.347	92.653	99.351
Feb.	100.586	100.257	93.763	....
Mar.	100.524	99.476	94.363	....
Apr.	99.145	99.286	92.988	....
May	96.853	98.335	94.512	....
June	94.488	98.025	94.619	....
July	96.131	96.44	94.892	....
Aug.	98.924	94.159	94.976	....
Sept.	103.559	93.313	94.054	....
Oct.	105.716	91.848	96.455	....
Nov.	110.329	89.236	98.985	....
Dec.	104.00	92.34	98.96	....
Aver.	101.252	93.672	95.069	....

Quicksilver Averages

N. Y. Monthly Averages

Virgin, Dollars per 76-lb Flask

	1956	1957	1958	1959
Jan.	277.80	256.00	224.35	219.50
Feb.	270.29	256.00	229.39	....
Mar.	261.40	256.00	232.096	....
Apr.	267.22	256.00	233.06	....
May	267.675	256.00	229.48	....
June	260.69	256.00	229.00	....
July	256.06	256.00	230.25	....
Aug.	256.00	252.20	240.27	....
Sept.	256.00	248.58	241.12	....
Oct.	255.92	234.48	235.94	....
Nov.	255.13	228.33	230.05	....
Dec.	256.00	226.50	223.54	....
Aver.	261.71	248.51	230.96	....

Primary Aluminum Output, Shipments and Stocks

(U. S. Department of Interior)

	Stocks beginning of month short tons	Production short tons	—Sold or Used— Short tons	Value f. o. b. plant	Stocks end of month short tons
1957					
September	192,976	129,278	147,169	75,823,527	175,085
October	175,085	133,759	125,430	67,292,495	183,414
November	183,414	135,024	146,333	78,858,676	172,105
December	172,105	140,036	140,996	70,850,564	171,145
Total	....	1,647,714	1,579,035	.....	.....
1958					
January	171,142	139,910	134,983	$69,837,103	176,069
February	176,069	121,980	118,608	61,426,895	179,441
March	179,441	134,019	123,461	63,341,320	189,999
April	189,999	124,999	127,608	63,222,858	187,390
May	187,390	126,357	130,160	62,816,641	183,557
June	183,557	115,326	130,787	63,091,679	168,096
July	168,096	118,541	134,083	64,726,335	152,554
August	152,554	125,416	132,765	64,611,494	145,205
September	145,205	124,714	146,870	71,641,275	125,049
October	124,274	139,836	139,908	68,881,146	124,202

Aluminum Wrought Products

PRODUCERS' MONTHLY NET SHIPMENTS

(Bureau of Census — Thousands of Pounds)

	Total	Plate, Sheet, & Strip	Rolled Structural Shapes, Rod, Bar & Wire	Extruded Shapes Tube Blooms & Tubing	Powder, Flake, & Paste
1954 Total	2,088,489	1,165,090	357,229	518,070	46,255
1955 Total	2,805,500	1,542,368	365,391	812,311	35,854
1956 Total	2,870,101	1,577,601	398,602	782,398	28,017
1957					
May	249,012	130,047	35,680	74,364	2,670
June	227,388	117,103	32,847	69,411	2,630
July	249,047	130,624	39,342	71,339	3,120
August	223,786	117,796	30,918	66,829	3,224
September	215,564	122,787	21,735	63,421	2,802
October	230,913	121,654	23,075	69,554	2,104
November	186,974	114,618	31,501	64,197	1,716
December	177,520	96,078	21,363	54,672	1,480
Total	2,677,423	1,396,502	399,040	789,430	28,187
1958					
January	193,678	108,616	21,915	57,188	1,538
February	207,459	118,835	21,983	58,296	1,927
March	190,092	108,913	20,692	55,973	1,533
April	210,477	118,793	22,178	62,737	1,954
May	217,299	115,660	27,361	67,376	2,389
June	228,587	118,767	28,674	74,580	2,248
July	229,654	126,160	24,678	72,194	2,642
August	213,548	115,376	23,581	67,953	3,154
September	231,168	125,937	23,287	75,269	2,665
October	254,023	128,967	24,442	85,038	2,163
November	216,249	121,190	17,771	71,666	1,723

Aluminum Castings Shipments

(Bureau of Census)

BY TYPE OF CASTING

(Thousands of Pounds)

	Total	Sand	Permanent Mold	Die	All Other
1954 Total	609,066	155,738	213,968	232,726	6,800
1955 Total	833,058	171,757	298,115	354,804	8,282
1956 Total	801,036	171,763	245,421	376,108	7,736
1957					
July	52,173	10,447	16,322	25,339	...
August	55,735	10,966	18,398	26,319	...
September	58,692	11,367	17,820	24,900	...
October	64,140	11,570	20,543	31,936	...
November	58,898	10,411	18,611	29,793	...
December	53,102	9,302	16,724	26,978	...
1957 Total	751,656	144,121	232,326	369,086	...
1958					
January	57,845	10,724	18,082	28,937	...
February	50,695	9,601	15,456	25,579	...
March	50,547	9,311	15,255	25,918	...
April	44,948	9,531	13,369	21,956	...
May	44,093	9,312	13,648	21,091	...
June	40,701	8,644	13,679	18,292	...
July	38,818	8,658	12,342	17,714	...
August	45,034	9,034	14,426	21,505	...
September	52,796	10,261	16,241	26,254	...
October	55,699	10,932	17,189	27,511	...
November	55,793	10,539	16,942	28,264	...

Virgin Aluminum

Ingot (30 lb.) 99½% Plus, Delivered

Monthly Average Prices

(Cents per pound)

	1956	1957	1958	1959
Jan.	24.40	27.10	28.10	26.80
Feb.	24.40	27.10	28.10	....
Mar.	24.60	27.10	28.10	....
Apr.	25.90	27.10	26.10	....
May	25.90	27.10	26.10	....
June	25.90	27.10	26.10	....
July	25.90	27.10	26.10	....
Aug.	26.70	28.10	26.77	....
Sept.	27.10	28.10	26.80	....
Oct.	27.10	28.10	26.80	....
Nov.	27.10	28.10	26.80	....
Dec.	27.10	28.10	26.80	....
Aver.	26.008	27.517	26.889	....

Magnesium Wrought Products Shipments

(Bureau of Census)

(Thousands of Pounds)

	1955	1956	1957	1958
Jan.	1,776	2,188	2,130	1,271
Feb.	1,648	1,901	2,522	2,522
Mar.	1,947	1,946	2,388	1,398
Apr.	1,756	2,279	2,511	1,479
May	1,836	2,462	2,230	1,443
June	1,686	2,302	1,881	1,709
July	1,437	2,002	1,428	1,227
Aug.	1,742	2,523	1,540	1,823
Sept.	2,159	2,031	1,501	1,807
Oct.	1,667	861	1,453	....
Nov.	1,954	2,141	1,230	....
Dec.	1,577	2,452	1,102	....
Total	21,186	24,975	21,915	....

Cadmium Averages

N. Y. Monthly Averages

Cents per lb. in ton lots

	1956	1957	1958	1959
Jan.	170.00	170.00	155.00	145.00
Feb.	170.00	170.00	155.00	....
Mar.	170.00	170.00	155.00	....
Apr.	170.00	170.00	155.00	....
May	170.00	170.00	155.00	....
June	170.00	170.00	155.00	....
July	170.00	170.00	155.00	....
Aug.	170.00	170.00	155.00	....
Sept.	170.00	170.00	152.60	....
Oct.	170.00	170.00	145.00	....
Nov.	170.00	170.00	145.00	....
Dec.	170.00	166.40	145.00	....
Aver.	170.00	169.70	152.30	....

Steel Ingot Production

(American Iron and Steel Institute)

Period	Estimated Production — All Companies OPEN HEARTH Net tons	% of capacity	BESSEMER Net tons	% of capacity	ELECTRIC Net tons	% of capacity	TOTAL Net tons	% of capacity	Calculated weekly production, all companies (net tons)
1954 Total ..	80,327,494	73.6	2,548,104	53.2	5,436,054	52.0	88,311,652	71.0	1,693,741
1956 Total ..	102,840,585	91.6	3,227,997	67.4	9,147,567	81.2	115,216,149	89.8	2,203,828
1957									
July	8,086,519	81.4	194,638	50.9	627,575	61.4	8,908,732	78.6	2,015,550
August	8,297,172	83.6	204,723	53.5	731,995	71.6	9,233,890	81.5	2,084,400
September ..	8,135,139	84.7	185,967	50.2	656,800	66.4	8,979,906	81.8	2,097,642
October	8,348,522	84.1	154,577	40.5	694,618	67.6	9,197,717	81.1	2,076,234
November ..	7,674,698	79.9	134,709	36.4	583,512	59.0	8,392,919	76.5	1,..56,391
December ..	6,783,262	68.3	108,337	28.3	528,686	51.7	7,420,285	65.5	1,678,798
Total	101,657,776	87.0	2,475,138	54.9	8,582,082	71.3	112,714,996	84.5	2,161,776
1958									
January	6,085,124	58.6	121,338	35.5	547,450	44.8	6,753,912	56.1	1,524,585
February ...	5,252,112	56.0	81,597	26.4	448,614	40.6	5,782,373	53.6	1,445,581
March	5,598,944	53.9	122,317	35.7	533,361	43.6	6,254,622	52.3	1,412,000
April	4,875,619	48.5	109,433	33.1	547,939	46.3	5,532,991	47.8	1,289,741
May	5,602,123	53.7	110,366	32.3	588,670	48.2	6,301,159	52.7	1,422,384
June	6,378,942	63.4	88,125	26.6	660,413	55.8	7,127,480	61.6	1,661,417
July	5,712,587	55.0	114,218	33.4	593,600	48.6	6,420,405	53.7	1,452,580
August	6,481,815	62.4	134,135	39.3	670,383	54.8	7,286,003	61	1,644,696
September ..	6,769,660	67.3	103,194	31.2	737,518	62.3	7,610,372	65.8	1,778,124
October	7,795,541	75.0	148,458	43.4	873,779	71.5	8,817,278	73.8	1,990,469
November ..	7,572,555	75.3	145,867	44.1	850,896	71.9	8,569,318	74.1	1,997,510
December ...	7,764,000	74.7	117,000	34.2	832,000	68.1	8,793,000	72.9	1,971,000
Total	75,888,392	62.0	1,396,348	34.7	7,972,623	55.4	85,257,363	69.6	1,635,162
1959									
January	8,281,000	77.1	120,000	39.5	724,000	63.2	9,312,000	74.3	2,102,000

Blast Furnace Output

(American Iron and Steel Institute)

	net tons Pig Iron	Ferro-manganese & Spiegel	Total	% Capacity
1950				
Tl. Yr.	64,810,272	673,896	65,484,168	91.5
1951				
Tl. Yr.	70,487,380	745,381	71,232,761	98.8
1952				
Tl. Yr.	61,828,665	629,926	62,158,591	84.1
1953				
Total ..	74,987,721	855,038	75,842,759	95.5
1954				
Total ..	68,119,882	568,735	68,688,117	71.6
1955				
Total ..	77,114,073	868,758	77,800,831	92.7
1956				
Apr. ...	6,869,823	63,760	6,924,583	98.6
May ...	6,873,102	47,840	6,920,942	95.3
June ...	6,387,608	46,981	6,434,589	91.6
July ...	1,089,518	17,491	1,107,009	15.2
Aug. ...	5,100,666	41,548	5,142,217	70.8
Sept. ...	6,873,064	59,584	6,972,648	98.7
Oct. ..	7,245,650	69,909	7,315,559	100.8
Nov. ..	6,977,457	58,614	7,036,091	100.1
Dec. ..	7,268,743	65,841	7,334,584	101.0
Total ..	75,301,134	664,341	75,965,475	88.9
1957				
Jan. ...	7,209,547	72,826	7,282,373	98.8
Feb. ...	6,596,133	61,973	6,658,106	100.0
Mar. ..	7,179,100	67,779	7,246,879	98.3
Apr. ..	6,810,102	60,784	6,870,886	96.3
May ..	6,879,881	65,566	6,945,447	94.2
June ...	6,593,326	66,266	6,659,592	93.3
July ...	6,625,901	66,031	6,691,932	90.8
Aug. ..	6,719,763	61,988	6,781,751	92.0
Sept. ..	6,569,074	58,837	6,627,911	92.9
Oct. ..	6,454,450	65,028	6,519,478	88.4
Nov. ..	5,711,242	68,637	5,779,879	81.0
Dec.	5,212,624	69,175	4,854,444	62.8
Total ..	78,557,011	782,660	79,339,671	91.4
1958				
Jan.	4,785,269	69,175	4,854,444	62.8
Feb.	4,016,276	47,953	4,064,229	58.2
Mar.	4,418,778	45,175	4,463,953	57.8
April ..	3,787,907	39,302	3,827,209	51.2
May ...	4,048,328	25,468	4,073,796	52.7
June ...	4,396,285	26,463	4,422,748	59.1
July ...	4,277,515	26,668	4,304,183	55.7
Aug.	4,799,955	31,374	4,831,329	62.1
Sept.	5,041,042	31,348	5,072,390	67.8
Oct.	5,835,995	36,963	5,872,958	76.0
Nov.	5,907,888	39,275	5,946,163	79.5
Dec.	6,025,385	47,505	6,072,890	78.6
Total ..	57,298,644	465,456	37,298,644	63.5

Galvanized Sheet Shipments

(American Iron & Steel Institute)

(Net Tons)

	1955	1956	1957	1958
Jan.	211,101	269,464	235,902	186,649
Feb.	199,408	272,997	205,048	167,627
Mar.	238,649	291,193	206,836	195,885
Apr.	239,001	266,728	198,585	206,368
May	235,962	272,741	206,657	231,318
June	246,940	279,058	239,037	277,180
July	205,211	*	167,247	239,883
Aug.	241,863	276,048	186,790	253,263
Sept.	269,020	256,803	183,952	258,723
Oct.	260,010	278,637	212,886	290,157
Nov.	255,692	255,135	190,380	253,909
Dec.	261,640	239,173	159,363	266,472
Tot.	2,864,497	2,957,991	2,392,637	2,828,848

* Combined with August figures.

Steel Castings Shipments

(Bureau of Census)

	(Short Tons) Total	For Sale	For Own Use
1951	2,101,604	1,507,413	594,191
1952	1,925,116	1,476,352	448,767
1953	1,829,277	1,290,016	431,330
1954			
Total ..	1,184,096	880,158	303,938
1955			
Total ..	1,530,694	1,166,706	363,988
1956			
Aug. ...	159,831	127,001	32,830
Sept. ..	155,046	121,705	33,341
Oct.	175,630	135,798	39,832
Nov. ...	164,114	126,900	37,214
Dec. ...	158,725	125,569	33,156
Total ..	1,931,987	1,512,290	416,697
1957			
Jan. ...	169,240	133,826	35,414
Feb. ...	154,932	121,667	33,265
Mar. ...	160,054	124,416	35,638
Apr. ...	162,498	124,549	37,949
May ...	164,575	125,431	39,144
June ...	153,647	119,353	34,294
July ...	122,018	90,037	31,981
Aug. ...	145,926	111,080	34,846
Sept. ..	139,002	105,611	33,391
Oct. ...	146,397	113,216	33,181
Nov. ...	127,115	98,436	28,679
Dec. ...	120,787	92,125	28,662
Total ..	1,766,191	1,261,301	406,444
1958			
Jan. ...	120,722	94,717	26,005
Feb. ...	103,297	79,708	23,589
Mar. ...	106,233	82,195	24,038
Apr. ...	91,464	69,121	22,343
May	87,002	66,086	20,916
June ...	92,681	71,624	21,237
July ...	68,802	48,618	10,184
Aug. ...	80,886	59,816	21,070
Sept. ...	85,277	64,586	20,691
Oct. ...	95,389	73,367	22,022
Nov. ...	85,267	65,788	19,479

SHIPMENTS OF TIN-TERNEPLATE

(American Iron & Steel Institute)

(Net Tons)

	Hot Dipped 1957	1958	Electrolytic 1957	1958
Jan.	88,174	31,455	492,502	474,359
Feb.	63,040	29,451	407,008	397,861
Mar.	113,593	36,794	618,827	419,102
Apr.	130,037	43,670	664,590	468,568
May	34,282	37,628	278,769	402,521
June	32,783	42,850	321,584	429,761
July	39,234	45,481	380,815	422,776
Aug.	40,542	46,037	409,515	464,439
Sept.	36,983	43,217	338,078	525,739
Oct	28,917	60,261	293,668	763,361
Nov.	20,645	14,596	256,911	113,134
Dec.	21,633	15,842	214,215	150,942
Tot.	649,974	447,396	4,676,482	5,040,190

Steel Ingot Operations

(Percentage of Capacity as Reported by American Iron & Steel Institute)

Week Beginning	1956	1957	1958	1959
Jan. 6...	97.6	98.4	56.1	76.2
Jan. 13...	98.6	96.4	57.0	73.6
Jan. 20...	99.0	96.6	55.5	74.6
Jan. 27...	100.4	97.6	54.0	72.6
Feb. 4...	99.3	97.1	54.0	76.9
Feb. 11...	99.1	97.7	53.5	83.8
Feb. 18...	98.8	97.8	50.9	83.7
Feb. 25...	98.8	96.0	54.6	...
Mar. 4...	99.3	97.1	53.1	...
Mar. 11...	100.0	93.8	52.4	...
Mar. 18...	100.6	93.5	52.5	...
Mar. 25...	99.5	92.4	50.6	...
Apr. 1...	96.6	90.6	48.6	...
Apr. 8...	97.7	90.3	48.5	...
Apr. 15...	100.9	90.4	46.8	...
Apr. 22...	100.2	88.7	47.9	...
Apr. 29...	100.5	87.0	47.8	...
May 6...	96.4	86.7	49.4	...
May 13...	95.2	84.2	52.3	...
May 20...	95.3	86.4	56.4	...
May 27...	97.3	88.0	58.1	...
June 3...	96.3	87.5	62.4	...
June 10...	96.7	86.5	84.0	...
June 17...	93.4	85.2	64.9	...
June 24...	93.0	84.0	61.7	...
July 1...	84.9	78.5	51.0	...
July 8...	12.3	78.7	53.4	...
July 15...	12.9	79.3	54.9	...
July 22...	14.6	79.4	57.3	...
July 29...	17.0	79.4	57.8	...
Aug. 5...	16.9	79.8	58.8	...
Aug. 12...	57.5	80.6	60.5	...
Aug. 19...	87.5	82.1	62.6	...
Aug. 25...	95.8	82.2	63.5	...
Sept. 2...	97.0	81.0	61.7	...
Sept. 9...	98.7	81.9	65.9	...
Sept. 16...	100.6	82.1	65.6	...
Sept. 23...	100.6	82.2	67.3	...
Sept. 30...	101.6	82.6	70.4	...
Oct. 7...	101.8	82.8	71.6	...
Oct. 14...	100.9	80.9	74.2	...
Oct. 21...	101.4	80.2	74.8	...
Oct. 28...	101.2	79.7	75.0	...
Nov. 4...	101.3	78.0	74.5	...
Nov. 11...	100.6	77.7	74.5	...
Nov. 18...	100.2	76.0	74.1	...
Nov. 25...	100.1	72.1	73.7	...
Dec. 2...	101.1	71.5	73.5	...
Dec. 9...	101.3	69.2	73.5	...
Dec. 16...	102.0	67.7	74.5	...
Dec. 23...	94.3	53.7	74.5	...
Dec. 30...	97.3	59.0	73.6	...

copper

Electrolytic NEC* CCC*

zinc

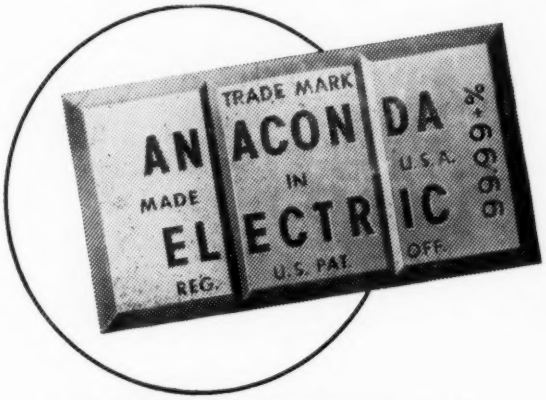
99.99+% Electric*
High Grade Electrolytic

lead

Common Desilverized ILR*

aluminum

Pig • Ingot



NODULIZED MANGANESE ORE

FERROMANGANESE STANDARD GRADE

CADMIUM • SILVER • BISMUTH • INDIUM

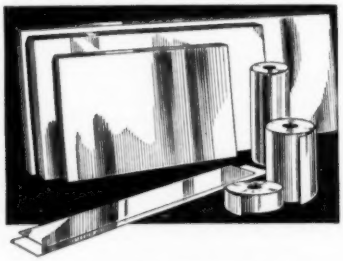
Arsenic • Palladium • Platinum • Selenium • Tellurium

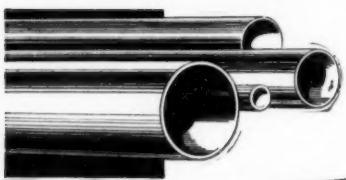
ANACONDA
from mine to consumer

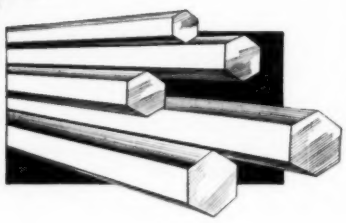
Anaconda Sales Company

25 Broadway, New York 4, New York
Subsidiary of The Anaconda Company

*Reg. U. S. Pat. Off.







ANACONDA®

COPPER • BRASS • BRONZE

Sheet, Strip, Rod, Wire, Copper Tubes and Fittings, 85 Red Brass Pipe, Free Cutting Rods, Die Pressed Forgings and Extrusions

made by

THE AMERICAN BRASS COMPANY · WATERBURY 20, CONN.

Subsidiary of The Anaconda Company

DISTRICT SALES OFFICES:

Ansonia, Conn.
Atlanta 8, Ga.
Buffalo 5, N. Y.
Cambridge 42, Mass.
Cedar Rapids, Iowa
Charlotte 2, N. C.
*Chicago 39, Ill.
Cincinnati 2, Ohio
*Cleveland 11, Ohio
Columbus 15, Ohio
*Dallas 6, Texas
Denver 16, Colo.
Detroit 31, Mich.
Houston 2, Texas
Kansas City 5, Mo.
Kenosha, Wis.
Los Angeles 17, Calif.
*Milwaukee 4, Wis.
Minneapolis 2, Minn.
Newark 2, N. J.
New York 16, N. Y.
*Philadelphia 22, Pa.
Pittsburgh 19, Pa.
*Providence 3, R. I.
Rochester 4, N. Y.
St. Louis 3, Mo.
San Francisco 4, Calif.
Seattle 1, Wash.
Syracuse 2, N. Y.
Torrington, Conn.
Washington 5, D. C.
Waterbury 20, Conn.

General Offices:
Waterbury 20, Conn.

In Canada: Anaconda American Brass Limited *General Offices:*
New Toronto, Ontario

Montreal Office:
939 Dominion Square Building

Vancouver Office:
1030 West Georgia St.

*Warehouses

SR294